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CHICAGO

Two Alumni meetings have been held in Chicago this fall. The first of these occurred on October 4, when Dr. Charles Janeway, Professor of Pediatrics, was the guest of honor at an informal cocktail party. The second took place on November 3 when Francis D. Moore, '39, addressed the Harvard Club of Chicago at a lunch.

The planning of both these Alumni efforts fell jointly on the shoulders of Richard B. Capps, '31, Vice President of the Alumni Council, and Oglesby Paul, '42. We congratulate the Chicago Alumni for their activity and interest.

ANN ARBOR

At six o'clock on the evening of October 10, the Southeastern Michigan Harvard Medical Alumni met for cocktails and a dinner at which the guest of honor was Dr. Edward H. Kass, Assistant Professor of Medicine. Approximately 20 members heard his description of some of the recent developments in the Department of Medicine.

The arrangements for the dinner were made by Melvin M. Figley, '44, Assistant Professor of Radiology at the University of Michigan Medi-

cal School, and Frederick A. Coller, '12, President of the Alumni Association in 1951-52, presided. The Alumni Office received a report of the meeting from Dr. Figley. Part of that report is quoted: "I know that I speak for the group in saying that we are happy to have entertained Dr. Kass and to have had the occasion to join together for the first time in several years. It was the unanimous opinion that this meeting should be an annual affair."

NEW YORK CITY

The fall meeting of the Harvard Medical Society of New York was held at the Harvard Club on Thursday, November 10 at 6:30 in the evening.

On this occasion, the speaker of the evening was Professor Richard A. Howard, Arnold Professor of Botany and Director of the Arnold Arboretum. His subject, "Jungle Housekeeping", dealt with the techniques of survival under varying circumstances, as they were developed for the Air Force during World War II. Almost 100 members of the Society formed a most enthusiastic audience. The meeting was presided over by the Society's President, John N. Robinson, '31.

CHAPEL HILL

A dinner in honor of Doctors Louis K. Diamond, '27, Associate Professor of Pediatrics, and Kendall Emerson, '33, Assistant Dean of the Faculty of Medicine, was held on the night of November 4 at the Carolina Inn in Chapel Hill. Edward C. Curnen, '35, who was chairman of the occasion, sent in the following brief report:

"Dean W. R. Berryhill was the genial host and master of ceremonies at this informal occasion. There were 17 in attendance. Following refreshments and dinner, Dr. Lou Diamond reported on recent developments at the Children's Medical Center and expressed speculation as to whether Dr. Kendall Emerson were following him around in the role of commissar. Dr. Emerson followed with assurances that such was not the case, and proceeded to divulge statistical information about the Harvard Medical School which astounded his audience.

"It was a great pleasure to have these two amiable visitors and to hear their accounts of new developments at the Harvard Medical School."

ATLANTA

On Tuesday, December 27, 1955, Dr. Alfred A. Weinstein, '33, was host at a dinner of H.M.S. Alumni in Atlanta given in honor of Dr. Mark D. Altschule, '32. In addition to the guest of honor and to Dean Boisfeuillet Jones of Emory University School of Medicine, the dinner was attended by some ten of the 18 H.M.S. graduates in Atlanta.

Of the party, Dr. Weinstein wrote in part: "As usual he (Dr. Altschule) impressed everybody with his charm, his modesty, and his keen intellect. It gave me great pleasure to demonstrate this token of my appreciation for the Harvard Medical School."

The Alumni Office in turn expresses its gratitude to Dr. Weinstein for his contribution to the forwarding of its regional program.

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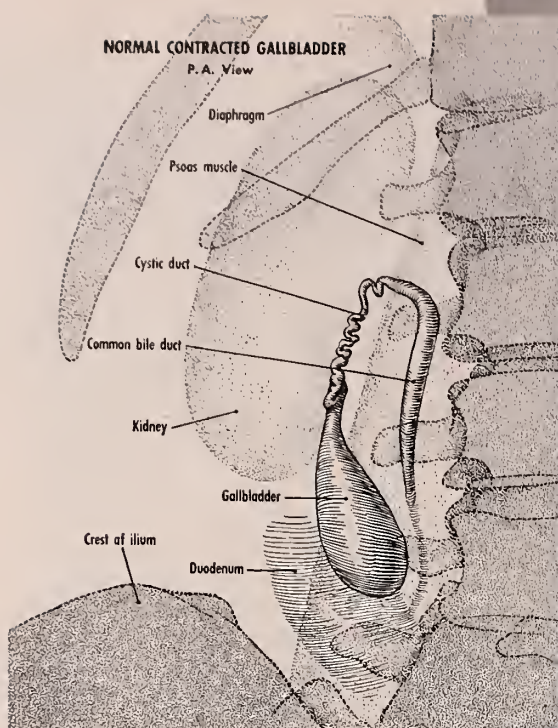
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Buckstein, Jacob: The Digestive Tract in Roentgenology. Philadelphia, J. B. Lippincott Co., 2nd ed., 1953, vol. 2, p. 1003.

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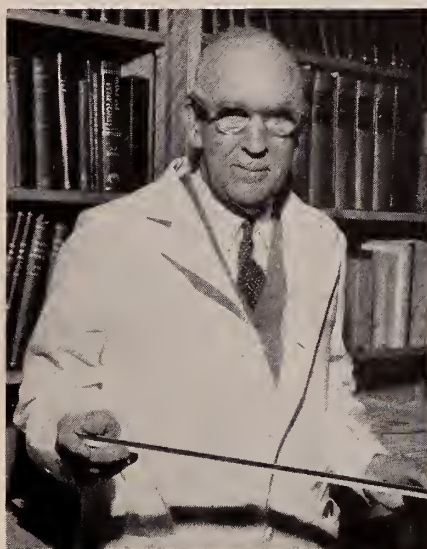
Milliequivalents and the Art of Healing

C. Sidney Burwell, '19

SAMUEL A. LEVINE PROFESSOR OF MEDICINE

In Dean Berry's admirable article entitled "Financing the Harvard Medical School," he emphasizes various aspects of the School's responsibility, considering with care and wisdom the balance between research and teaching. This article has stimulated many useful discussions, and one of the questions raised is whether the demands of research have led to preoccupation with this area of the School's job to the detriment of certain parts of the teaching. This article is written to consider this problem on the basis of my experience.

Medicine has an honorable history. Its distinguished past is in some danger of being forgotten in the excitement of the rapidly changing present. Medicine has changed with extraordinary rapidity in recent decades. What has happened is that in many fields clearer knowledge and better understanding of the mechanisms of disease have tended to replace tradition and speculation. Many physiologic processes have been unraveled. Pathogenesis is partly understood. This growing knowledge of the mechanisms of disease makes it possible in many happy instances to influence and to alter them toward the normal. The problem of medical education has thus been altered. The assimilation of great numbers of facts is now not enough. It is necessary that there should be an understanding of the complex processes involved in the maintenance of health, and the development of disease, and that this understanding be sufficient so that informed action on the part



Dr. Burwell

of the doctor can assist the body in its adjustments to injury.

Advances in the science of medicine have in general been reflected in the teaching of the Harvard Medical School, and the graduates of this School are better able than were their predecessors to analyze the physiology of health and disease and to plan appropriate action.

The present capacity of medicine to do good is more effective than it was because of research, and because the research of the last hundred years has covered a wide spectrum involving fundamental science, human physiology, and the study of the mechanisms of disease in patients. One of the needs of medical education is to maintain and to deepen the undergraduate study of the basic sciences which underlie the modern science of medicine. The indispens-

able discipline of the medical sciences is, however, not by itself enough.

We know that in addition to a science of medicine there is also an art of healing. This art brings to the patient comfort, reassurance, and a helpful degree of understanding; it lifts his courage and enlists his cooperation. The art of healing is older than the science of medicine and equally indispensable to the effective functioning of physicians. This aspect of medicine therefore should be well represented in medical school teaching and in programs of training for interns and residents. This brief article is written to ask, and perhaps to answer the question—does the Harvard Medical School now produce good physicians as well as good medical scientists?

We may put the question in another way—the Harvard Medical School is a great center for medical research and the advancement of medical science. Has the emphasis on science and research been accompanied by a loss of skill in something equally important to the practice of medicine—namely, the healing art?

These are good questions to ask, but they are not new. A classic and familiar article dealing with this problem is Francis W. Peabody's "The Care of the Patient", first published in 1927. This lucid and beautiful expression of the successful combination of medical science and the art of healing in one person has influenced the art and the practice of doctors for nearly thirty years. Dr. Peabody's first paragraph reads as follows:

"It is probably fortunate that most systems of education are constantly under the fire of general criticism, for if education were left solely in the hands of teachers the chances are good that it would soon deteriorate. Medical education, however, is less likely to suffer from such stagnation for whenever the lay public stops criticising the type of modern doctor the medical profession itself may be counted on to stir up the stagnant pool and cleanse it of its sedimentary deposit. The most common criticism made at present by older practitioners is that young graduates have been taught a great deal about the mechanism of disease but very little of the practice of medicine—or, to put it more bluntly, they are too 'scientific' and do not know how to take care of patients."

Dr. Peabody then goes on to demonstrate that the Department of Medicine presided over by him was specifically concerned with the practice of the healing art as well as of the science of medicine and with the instruction of students and house officers in both of these essential divisions. He concludes his charming lecture as follows: "Disease in man is never exactly the same as disease in an experimental animal, for in man the disease at once affects and is affected by what we call the emotional life. Thus the physician who attempts to take care of a patient, while he neglects this factor, is as unscientific as the investigator who neglects to control all the conditions that may affect his experiment. The good physician knows his patients through and through and his knowledge is bought dearly. Time, sympathy, and understanding must be lavishly dispensed, but the reward is to be found in that personal bond which forms the greatest satisfaction of the practice of medicine. One of the essential qualities of the clinician is interest in humanity, for the secret for the care of the patient is in caring for the patient."

Dr. Peabody's article will never be out of date. It should be read periodically by every physician.

A second classical article appeared

only last year in the *Saturday Review*, written by Dr. Dana W. Atchley, Professor of Clinical Medicine at Columbia University. The article is entitled "The Healer and the Scientist" and is an important and encouraging synthesis. Let me quote two sentences from this luminous article. "The introduction of the highest possible standards of scientific precision into clinical medicine is no deterrent to the exhibition of compassion or any of the other generous gifts of the healer. Merging the healer and the scientist combines the best capacities of both and loses nothing by the union."

Now let us turn to the specific question of whether the Harvard Medical School produces good physicians. Before putting on record my opinion about this matter, let me ask and answer a preliminary question: is there something about scientific medicine which is somehow incompatible with the compassionate and understanding care of the patient as an individual? We do not need to waste much time on this question. In a group of individuals highly trained in scientific medicine there will be varying degrees of aptitude and skill in the art of healing as in any other group of people, but to say that scientific medicine and skill in the art of healing are incompatible is to my mind nonsense. One has only to turn again to Dr. Peabody and to his article on "The Care of the Patient" to realize that really scientific—that is, really informed medicine does take due account of the effect of emotion, of the patient's personality, and of the patient's total situation on the course and management of disease, and does apply skill to the management of these aspects of medicine. Dr. Peabody himself was a great example of the scientific physician at the same time that he was a great example of the master of the healing art.

The second question is somewhat more involved. It is: does the Harvard Medical School as of today produce good physicians and, if so, by what means is this accomplished? My answer to this question must be an

individual one, and perhaps I am a prejudiced observer because I participate actively in the teaching of Harvard Medical School students and have only recently completed a three-year term directing the introductory course in Medicine in the Second Year. But I like to think that I am a qualified observer because for twenty years I have not only participated in the teaching of Medicine, but have been concerned with evaluating the teaching, its organization, its spirit, and its product. On this basis, my answer to my own question is clear. Students of today are not more defective in their capacity as practitioners of the healing art than the graduates of my day. Indeed, I am inclined to think that in some ways they may be better equipped in this respect.

Assuming for the moment that I am right and that the medical student of today is potentially capable of growing into a good physician, what are the mechanisms by which this has been brought about? It seems to me that several are involved. First, there is the quality of the college students who apply for admission to the Harvard Medical School. Here the School is fortunate in having a large number of individuals superior in both intellect and character who seek admission to its courses. Second, there is the general policy of the Committee on Admissions with regard to the factors that are to be considered in selecting students for Medicine from this large group of applicants. Judging by my own experience and by the quality of the student body, I am sure that the Admissions Committee does give due and careful emphasis to the intangible assets of character in making its important decisions.

Next there is the matter of the curriculum itself. Here it is important to say a brief word about the interpretation of a curriculum as it appears on a chart in the Medical School catalogue. Actually the allocation of time to various departments in the catalogue of the Harvard Medical School has not changed very violently in the past half century,

and yet within this compartmentalization there has been a substantial revolution in the matter and the manner of teaching.

The medical student of today hears a good deal more about the aspect of medicine which I have chosen to call the healing art than his predecessors of twenty or thirty or forty years ago. He begins to hear it in the very first year when he sees patients in the Saturday morning clinics that are organized in connection with the course in anatomy and given by physicians and surgeons who are deeply aware of the importance of the healing art and inevitably impressed by the student's own interest in this aspect of medicine. The student has a more formal introduction to this subject in the second half of the First Year when he has a series of meetings in a course called "Medical Psychology". The introductory course in medicine and surgery in the second half of the Second Year has become progressively impregnated with emphasis on this important aspect of medicine. For a number of years the course has started off with a lecture usually given by Dr. Herrman Blumgart, which is quite specifically an attempt to give the student the point of view about patients expressed so clearly in Dr. Peabody's famous lecture.

Other lectures in medicine, pediatrics, and surgery, in obstetrics and in many special fields emphasize this point of view. The section teachers of the small groups of medicine and surgery in this Second Year course are selected not only with regard to their competence in medicine and surgery and the scientific basis of practice, but also with regard to their capacity to give an example in doctor-patient relationship which the developing physician may see and perhaps follow. For the last four years members of the Department of Psychiatry have participated actively

in the teaching of the introductory courses in medicine and surgery. The purpose of this is not to teach psychiatry as such, but to emphasize and analyze the continuous importance of the physician's function as a healer as well as a medical scientist.

Thus it can be said that the student, even in the "pre-clinical" years, certainly hears about this aspect of medicine. One even wonders if he hears about it too often and that what is said about it may tend to become stereotyped and therefore less effective than it might be. However this may be, talking about this aspect of medicine is not the most important variety of teaching. It is my conviction that nothing in the teaching of medicine is as important as example. Fine words about medicine, whether about medical science or the doctor-patient relationship, are not effective unless exemplified by attitude and action.

The effectiveness of teaching, then, is dependent particularly on what the teacher himself *does*. In this regard the Harvard Medical student on the whole is fortunate. He has a lot of teachers; he has a wide spectrum of behavior to watch. Since teaching is done in small groups, he has really an unexcelled opportunity to see his elders in action and to observe them as they perform their function as doctors. He will see some who are at the same time good medical scientists and good practitioners of the healing art. He sees others who are less good as practitioners. Usually his appraisal of these groups is clear. As he goes on in his courses of the Third and Fourth Years he comes into contact with the philosophy and the performance of more and more of his teachers. He can and does choose the examples that he wants to follow.

The importance of these examples leads to the question as to whether the mechanism of appointment of

teachers leads to the appointment of good doctors as teachers. Here, on the basis of having heard the discussions in a fair number of committees, I can be categorical. This aspect of the matter is given deep consideration in the appraisal of prospective teachers. If one scrutinizes the appointments that have been made in the last twenty-five years to the Faculty, he will, I think, be struck by the fact that in general the occupants of key positions in clinical departments are at the same time good scientists and good doctors.

There are other mechanisms by which a student may learn the importance and something about the methods of the healing art. One of them is by having the often rewarding and instructive experience of illness in himself. The Student Health Service as developed by Dr. Arlie Bock and Dr. Dana Farnsworth has been, among other admirable things, an educational influence of importance. It can give a demonstration of effective medical care when a student is in a state most vulnerable to such education—namely when he himself is ill or in trouble.

In conclusion, probably three things are important enough to say.

1. The students of the Harvard Medical School are interested in patients and in taking scientific and understanding care of them.

2. The faculty of the Harvard Medical School is interested in training good physicians and in setting an example in the teaching hospitals of skillful application of both the science and the art of medicine.

3. There is opportunity in the experience provided students in the Harvard Medical School for the perceptive student to acquire a foundation for the development of his practice of the art of medicine.

LAVENDER AND OLD LUCITE*

A Presbyopic View of Medicine from a Lucite Tower

Mark D. Altschule, '32

It is an honor to be asked to address the Class of 1955—which of course is the best class that ever graduated from the Harvard Medical School. I presume that you are here to receive a parting MESSAGE from the faculty; therefore I will dispense with any further reciprocating compliments and pass on to the MESSAGE that you have assembled to hear.

I might commence—in proper medical style—with some physiologic considerations. The presbyopia that accompanies aging in man will inevitably influence this discussion. Since what is close at hand looks blurred to the aging Faculty, we are forced to look farther back and farther ahead than the students. Distant vision is enhanced by elevation above the ground; hence today's point of view will be the top of the modern equivalent of an ivory tower.

At this juncture, in a MESSAGE of this type, the speaker usually says, "You are now standing on the threshold of something or other"—and I shall not deviate from the established custom. You—the Class of 1955—are now standing on the threshold of the closing decades of a great medical era—the physiologic-biochemical era.

This statement does not mean that I expect that all biochemical publication will cease by next year. On the contrary, we may expect a great increase in the number of papers published in the next decades, as development comes to replace research. (Research is the discovery of new concepts or methods; devel-

opment is the use of available concepts and methods to discover a multitude of small facts.*) On the one hand, biochemical research will yield less and less in proportion to the amount of effort, time, and money expended; on the other hand, development will produce a deluge of small facts through the application of relatively little time and effort. However, the process of development will become increasingly expensive, owing to the cost of the various electronic devices that will take over most of the observing and some of the thinking involved. One consequence of this expansion of development and this ease of acquisition of facts will be that no man will be able to obtain an internship at the MGH without a bibliography of at least ten papers—and the requirements at the other Boston hospitals will be in proportion.

This multitude of new facts will frighten and bewilder the medical student, enrage the general practitioner, and drive the writer of review articles to distraction. Nevertheless, these findings will prove useful in many ways. For example, one such fact—no matter how irrelevant—may turn the tide if mentioned casually during a pause in an oral examination. The student might try something like "Is it not interesting that carbonic anhydrase contains zero point three per cent zinc?" Irrelevant facts are also invaluable in discussions of other men's papers at medical meetings. When chosen

from suitably remote subject-matter and dispensed with proper lavishness, such items can be used either to hide one's own ignorance or to suggest that one's opponent is an ignoramus.

As biochemistry loses some of its power to arouse excitement and wonder, it will inevitably recede from its present high position in medicine. Something else will of course rise to replace it. No crystal ball is needed to tell us that this will be sociologic psychology, or perhaps psychological sociology. This child of mixed parentage is already kicking within the womb of medicine, causing a certain amount of discomfort and arousing wonder, and perhaps apprehension, about what sort of child it will be. Certainly the character of medicine for the next 50 years will depend on how that child develops in relation to medicine.

At any rate, in 20 years or so, many of you, instead of tracing the wanderings of some ion in the body, will be writing papers with titles like "An Overview of Ongoing Interhumanship. XII. Empirical validation of meaningful data obtained in an integrated multifactorial interdisciplinary study of the effect of interbehavior in television soap-operas in maximizing the role of the mother as a father-figure."

Physiology and chemistry will not be entirely neglected, of course. By that time there will be fairly general agreement that the pineal gland is the seat of the Super-Ego, that the autonomic nervous system is the seat of the Id, and that the ascending reticular activating system is the seat of the Ego. A new struc-

* This differentiation is not intended as derogatory. Development makes the fruits of research available for practical use; it also provides facts that may stimulate research for new principles.

* Delivered at Class Day, May 28, 1955.

ture, the descending activating system, will have been discovered in the filum terminale and will be shown to be the locale of the Infra-Id*.

Let us now turn our presbyopic gaze toward the past; perhaps the past will yield some clues to future developments.

Until the mid-nineteenth century scarcely any distinction was made between the emotional and the physical causes and manifestations of disease. The poet Schiller was one of those who assigned a superior status to the study of the emotional aspects. He said (in his inaugural dissertation for the M.D. degree in 1780) that close observation of patients' emotions was necessary "to raise the Hippocratic art above the narrow sphere of a mere bread-earning craft."

It was realized from earliest times that study and evaluation of the role of emotion was, and always would be, difficult. Sanctorius, after a searching consideration of the relations between mind and body, issued the following conservative statement in 1614:

"... And thus although a Person cannot tell either how Thought can produce such a change in the Humours of his body, or how such a Constitution of the Humours can affect the Passions of the Mind; yet if by constant Observation and Experience it can be found that such a Passion or Temper of Mind, is always attended with such Consequences in the Constitution; and that such a particular Temperature of the Constitution, always affect the Mind with such particular Passions and Dispositions, it will afford sufficient Ground of Certainty to a wary and considerate Person, in his reasoning upon their Consequences and in the Measures which ought to be taken in rectifying the Disorders of either." Modern times have produced no improvement on these old ideas.

The ills of mankind—particularly the emotional ills—have been attribu-

ted to civilization for hundreds of years. A Chinese medical classic of about 2700 B.C. states this belief, adding: "Nowadays habits are intemperate and disorderly as compared to ancient times." These words of 46 centuries ago have been echoed hundreds—perhaps thousands—of times since. Müller, in his book *The Uses of the Past*, derides this "belief that civilization is a disease"; nevertheless, it is one of the most persistent of all sociologic concepts. The idea is somewhat modified by different eras; for example, a local gentleman writing in the *Atlantic Monthly* a hundred years ago pleaded for an end to our decadence so that we might be able to "risk all other perils—financial crises, slavery, Romanism, Mormonism, border ruffians, and New York assassins."

Actually, the possible relations between civilization and emotional disorders should be studied in the form of four propositions: (1) civilization causes emotional disorders; (2) emotional disorders cause civilization; (3) both cause each other; (4) neither causes the other.

We must realize that the wave of the future contains water which washed the shores of antiquity. This is true even of the impending trend to sociologic psychology. Ancient writers had much to say about the influence of upbringing on the future lives of children. Perhaps the most familiar comment is "As the twig is bent, etc." Some authors wrote about the effects of too little or too much mothering. With respect to the former, it is interesting to recall some experiments made by the Holy Roman Emperor Frederick II in the thirteenth century. A chronicle of the period tells us that he "wanted to find out what kind of speech and what manner of speech children would have when they grew up if they spoke to no one beforehand. So he bade foster mothers and nurses to suckle the children, to bathe and wash them, but in no way to prattle with them or to speak to them, for he wanted to learn whether they would speak the Hebrew language, which was

the oldest, or Greek, or Latin, or Arabic, or perhaps the language of their parents, of whom they had been born. But he laboured in vain, because the children all died. For they would not live without the petting and the joyful faces and loving words of their foster mothers and songs which a woman sings while she is rocking the cradle, to put a child to sleep, and without them a child sleeps badly and has no rest."

With respect to excessive mothering, examples of this were reported, as well as instances of abnormal closeness between mothers and their sons. I will not consider the Oedipus tale here: in the first place it was only a legend, and in the second place it does not apply anyway, since the protagonists neither wished for an incestuous relationship nor were at first aware of being involved in one. Nor will I discuss the mystical idea of the unity of Jesus and Mary that was propounded by some medieval mariologists. I will merely mention some contemporary comments on a few historical figures. Martin Luther's feelings toward his mother were abnormally strong by any standards; they have been cited as an explanation of his rejection of papal authority—since the latter might be construed as an attribute of the father-figure. On the other hand, Louis IX, who also was strongly bound to his mother, engaged in no such religious revolt; on the contrary, he was canonized. King Louis and his wife would nowadays be considered the victims of Momism at the hands of Queen-Mother Blanche. We are told that:

"The unkindness that the queen Blanche showed the queen Margaret was such that she would not suffer, in so far as she could help it, that her son should be in his wife's company, except at night when he went to sleep with her. The palace where the king and queen liked most to dwell was at Pontoise, because there the king's chamber was above and the queen's chamber below; and they had so arranged matters between them that they held their converse in a turning staircase that went

* For a discussion of the Infra-Id, see: Fremont-Smith, F. *The Infra-Id as Analog of the Super-Ego*. *J. Semant.* *Inadeq.*, May, 1955.



"King Louis and his wife would nowadays be considered the victims of Momism. . . ."

from the one chamber to the other; and they had further arranged that when the ushers saw the queen Blanche coming to her son's chamber, they struck the door with their rods, and the king would come running into his chamber so that his mother might find him there; and the ushers of Queen Margaret's chamber did the same when Queen Blanche went thither, so that she might find Queen Margaret there."

Louis was prostrated for two days when his mother died. His excessive filial devotion was extensively discussed by historians, but these writers never tried to use it as an explanation of any character defects in him, since it was well known that both before and after her death he was one of the most effective men of his era. Perhaps the truth of the matter is that Momism can weaken only those who are already weak.

From our lucite tower we can discern other aspects of ancient thought which have pertinence for today's medical educators. One such problem, the raising of the barriers between the disciplines, was deplored centuries ago. Hugh of St. Victor wrote in the twelfth century: "The arts indeed are so closely connected, and are each in turn so dependent on the principles of the others, that if one is lacking, the others are not able to mold the philosopher. Therefore, it seems to me that those err who, not paying attention to such coherence in the arts, select for themselves certain of these arts, and leaving others untouched, think that they can perfect themselves in those which they have chosen."

Neglect of basic studies was decried. Francis Bacon (1605) said: "I express my surprise, that among so many illustrious colleges in Europe, all the foundations are engrossed by the professions, none being left free for the cultivation of the arts and sciences . . . For if any man esteem philosophy and every study of a general character to be idle, he plainly forgets that in their proficiency the state of every other learning depends, and that they sup-

ply strength and force to its various branches . . . For if you want a tree to produce more than its usual burden of fruit, it is not anything you can do to the branches that will effect this object, but the excitation of the earth about its roots and increasing the fertility of the soil."

Bacon also commented on the unsatisfactory status of teachers: "Since the founders of colleges plant, and those who endow them water, we are naturally led to speak in this place of the mean salaries apportioned to public lectureships, whether in the sciences or the arts. For such offices being instituted not for an ephemeral purpose, but for the constant transmission and extension of learning, it is of the utmost importance that the men selected to fill them be learned and gifted. But it is idle to expect that the . . . scholars will employ their whole energy and time in such functions unless the reward be answerable to that competency which may be expected from the practice of a profession. The sciences will only flourish on the condition of David's military law—that those who remain with the baggage shall have equal part with those who descend to the fight, otherwise the baggage will be neglected. Lecturers being in like manner guardians of the literary stores whence those who are engaged in active service draw, it is but just that their labors should be equally recompensed."

Early writers were also concerned with semantics—another matter that is still of importance today. Difficulties connected with the meaning of words were widely recognized. Philo stated, in the first century A.D., that "the learned neglect words." Digby made a systematic study of the problem in 1669; some of his conclusions are as follows: "The first error is a multiplying of things, where no such multiplication is really found . . . A second error: the conceiving of many things as really one thing . . . Great errors arise by wresting words from their common meaning to express a more particular or studied notion." You

will also recall Bacon's systematic study of sources of error in thinking—published in 1620.

Certain authors also recognized that some research methods that yield information about groups tell us very little about individuals; this criticism may be directed against the present-day use of statistics. Roger Bacon denied that astrology was helpful for studying one person, but he concluded that it was definitely useful in studies of manners and customs of groups of persons. Bacon did the best he could with the only method then available for studying multifactorial sociologic phenomena; likewise we of today are forced to use the statistical method, unsatisfactory at it is. (The anecdotal method now widely used in psychiatry and psychosomatic medicine cannot define causal relations.) Perhaps the future will provide a new way of analyzing multifactorial causal relations; certainly there is a great need for some such method.

Some ancients, unable to explain phenomena by the laws of cause and effect, used other means. One was allegory; this was employed by Origen, Clement of Alexandria, and Maimonides. Allegory of course is still used in some quarters to explain mechanisms. Some of the ancients also used the doctrine of The Identity of Opposites for this purpose. This concept was expressed by Heraclitus, who said: "That which is at variance with itself agrees with itself." The idea was elaborated by Nicholas, Archbishop of Cusa, in the fifteenth century and by Hegel and his followers in the nineteenth. (This useful doctrine is of course still a mainstay of one particular branch of medicine.)

Some writers faced with the problem of organizing extensive—and vague—fields of thought became lost in details. They were, in the words of Timothy, "ever learning, and never able to come to the knowledge of the truth" (II Timothy 3:7). Some of these authors finally reached a state of mind demonstrated by Arcesilaus (315 B.C.), who said that the

duty of the wise man was to refrain from giving his assent to any proposition at all.

On the other hand, many scholars sought refuge in dogmatism. The words of Isaiah, "Unless you believe, you will not understand," were echoed by others; Nicholas of Cusa said: "Where there is no sound faith, there is no understanding." Another concept, similar in some respects, was that of Pythagoras, who declared that pupils were not to ask the reason for anything until they had studied for seven years. Interestingly enough, physicians who wrote about mental disease in the seventeenth, eighteenth, and early nineteenth centuries were concerned about the prevalence of dogmatism.

Unrestrained speculation and theorizing also were depreciated. George Cheyne remarked in 1724: "These are indeed Edge-Tools, not to be trusted in the hands of any but those who have already acquired an humble Heart, a lowly Spirit, and a sober and teachable Temper. For in others they are very apt to beget a secret and refined Pride, an overweening and over-bearing Vanity that tempts them to presume on a Kind of Omniscience, in Respect of their Fellow-Creatures, that have not risen to their Elevation; and to set up for an Infallibility, or at least a decisive judgment."

I have perhaps quoted too extensively from authors of an earlier era; therefore I will start my closing—with a quotation (from Ovid):

"When I peruse this tract
which I have writ,
I am abash'd, and much I hold
unfit."

I have probably also taken too long to indicate what you have already learned: that in medicine, particularly in its more speculative aspects, the turn of fashion's wheel is likely to bring back old ideas and situations. Perhaps by studying the lessons of the past we may learn enough to avoid making certain errors that might retard or distort the growth of the medicine of the future.

MISSION TO A PHOENIX

William L. Nute, Jr., M.D., Johns Hopkins, '43



Peasant women in a doctor's waiting room

"Don't try to practice in the Near East. Your training will be wasted for lack of facilities and lack of freedom from restrictions." This was the advice I got ten years ago as I was planning on a medical missionary career in Turkey. Now my furlough year is being crowded with as much good Harvard training as I can get in, such are the opportunities to use the best you've got in Turkey, keystone of the Near East.

I had my first view of Turkey in 1924, when the Republic was only three months old. I have grown up with the country, and by now the only thing about it that I am fairly sure cannot and will not change in my lifetime is the basic physical geography of mountains, rivers, and

plains. Even that isn't absolute: the spot where we used to have picnics is about to disappear under the waters of one of the largest triple-purpose dams in Europe or the Near East.

That Turkey was the first nation to join the United States with troops in Korea, and is now anchor man on the eastern end of the NATO alliance, is well enough known in this country. What deserves to be even better known is the way this country has pulled itself up in thirty-odd years from chaos and defeat to be the stablest, strongest, and most advanced community in the whole Near East.

Culturally, politically, economically these changes are still going on. The process not only is interesting as an object lesson in what can happen in a human society under some conditions, but is important because of the influence which these events are likely to have throughout a wide region. Turkey is thus a pivotal area on which to keep an eye.

In the area of cultural change, the

status of women would furnish material for several doctoral theses. A generation or two ago they were rarely educated, and were kept not only in pretty general subjection but also in isolation from any but their own sex. In a single lifetime thousands of them have moved across a gulf which we in the west took well over a century to traverse. When our school for boys in Tarsus put up a new building recently, the architect was a woman. Women practice law, medicine, and the other professions; some are court judges, others are members of parliament or of university faculties.

The situation in nursing is a special illustration of the difficulties in adjustment produced by so rapid a change in the status of women. In its modern form this profession had its birth in Turkey a century ago, and every nurse knows the story of Florence Nightingale in the Crimean War. Yet the same two-fold struggle which she had to fight and win in the west has to be gone through almost from the beginning in Turkey. Not only must the right and competence of women in a profession be recognized, but the vocation of nursing itself must be established as one of dignity and honor and not merely a glorified form of menial labor. Many a woman has had and will have to pay a price for this, but today the Ministry of Health has a division for nursing and a woman in charge of it.

My wife was giving English lessons to the daughter of a prominent physician. The girl had received a western education at an American school in Istanbul—including, of course, English literature—so her English was already more than fair. One day my wife received word not to come, and next week asked if the girl had been ill. No, but that morning her father had notified her that in the evening she was scheduled to become formally engaged to a man she had not yet met. The old autocrat, himself an educated man, had been perfectly willing to give a good education to

Editor's note: Dr. Nute, a medical missionary of the Congregational Christian Church, is spending a furlough in graduate study in his field of pediatrics, and meanwhile is recruiting doctors and nurses for his board's medical missions. Inquiries may be addressed to 14 Beacon Street, Boston, Massachusetts.

his daughter—but had not understood enough of what such an education might mean to her to prevent him from marrying her off as though she had been brought up in ignorance and submissive seclusion. In this particular instance, the results turned out to be happy, but one can imagine that to be educated in one cultural tradition and then find oneself married off according to the practices of another often leads to considerable grief, for individuals of both generations. It is the children of the young women of today who are going to have an easier time.

Weld two strips of different metals into a solid bar, and then heat it: different rates of expansion cause the bar to bend, with considerable force. So it is in a society that sets out to assimilate rapidly an alien culture. Beside the divergencies between generations just illustrated, the unequal rates of absorption of the new ideas have led to a widening of gaps between social classes. One of our neighbors who, though now happily married, had earlier furnished a less happy illustration of the conflicts in marriage ideals than the previous story—was an opera singer, with leading roles in *Carmen*, *Figaro*, and other classics. (Nowhere have I so enjoyed opera as in Ankara.) But our maid, an intelligent, enterprising but illiterate village woman, took for granted that the opera singer was a bit disreputable and saw no difference between her and the girls who sang in bars and shady nightspots. The educated, city-bred woman of thirty or forty and her peasant contemporary have less in common by way of interests, viewpoint, and range of information than did their mothers or grandmothers. The amazing thing is that the discrepant rates of change in different sections of the population have produced so little serious trouble and that the revolution was accomplished and continues without significant violence or class conflict. It is another evidence of the real strength of the Turkish nation.

When I was taking first-year Latin at Andover, the instructor, presumably grasping at straws in an effort

to justify the subject to his class, informed us that Turkey had just adopted Latin as the national language. I was so tactless as to rise and correct him on this, but the truth, though less spectacular, was remarkable enough. Within the space of months Turkey had abolished the use of the difficult, unsuitable Arabic alphabet which had done so much to hinder popular education, and adopted a phonetic alphabet based on the Latin characters shared by French, German, English, etc. Not only has this had the practical effect of making possible a great increase in literacy but it was, symbolically, another of the links with which Turkey has welded herself to the West.

But this is only one aspect of a revolution in educational theory and practice which is still continuing, the transition from a clerical education based on Muslim scripture to a secular training based on the sciences and humanities. Indirectly, the mission boards can take considerable credit for this, for it was they who introduced the western notion of education into Turkey a hundred years ago. Nor must it be supposed that Turkey's intellectual life only began with the revolution in the 1920's. Indeed, the Turkish court in the sixteenth and seventeenth centuries was as brilliant as any in Europe and offered as fine an education to able men. But in terms of popular education, Turkey has in a generation progressed almost from mediaeval to modern times. Of course, this is one of the most basic and far-reaching of the revolution's many changes, and like the others is not yet complete nor evenly distributed in its effects. Turkey has three universities and is building a fourth, and the secondary schools are keeping them well supplied with students. Yet when I was trying to regulate a diabetic, I had to deal with a woman who was far too poor to own a clock and too ignorant to read it, and for whom I rigged up a sand-glass with a couple of old bottles, for her to time the boiling of her syringe. And the only person on night duty in an entire pediatric serv-

ice of forty beds had laboriously to be taught to print the letters A, B and C, that she might indicate whether the infants had accepted and retained, rejected, or vomited their feedings. Popular education still has a long way to go to equal the present norms in the older western countries. But the standard of comparison, in this and most other matters, ought not to be the older members of the West which Turkey has been hastening to join, but rather should be the East to which she is culturally and geographically linked and by comparison with which she has made such incredible progress.

Changes in political life have been no less dramatic and instructive. In the days of the Tudor and Stuart kings, England and even France were relatively puny powers beside the great Turkish empire which dominated the eastern Mediterranean with its European and Asiatic hinterlands. Then for three hundred years the absolute, theocratic monarchy slowly decayed into the "Sick Man of Europe" who cunningly played off the new Great Powers against one another to preserve a specious sovereignty. It probably would have taken much less of a storm than the First World War to scatter this flimsy structure, but few observers supposed that it had as tough a core as that cataclysm left behind it. No longer adorned nor weighted with empire, "Turkey for the Turks" emerged from ten years of nearly continuous warfare a republic in name but a dictatorship in fact. It was a change, but was it progress?

It was. In those days one could hear a citizen, speaking confidentially, curse out the inefficiencies and injustices of the regime with sufficient fervor to assure one of his sincerity; but if one asked him if he would prefer to go back to the days of the sultans his denial would be emphatic. The Turks were beginning to believe in themselves again. The one-party dictatorship, sometimes ruthless though never terroristic, proved to be a passing phase, indispensable to a nation which had no tradition of popular democracy. In time the single

Republican party permitted formal opposition, overhauled the election laws, broadened the franchise, and in 1950 found itself peaceably voted out of office in a landslide election victory for the Democrats. I can think of no precedent in history for such a transition, and its effect on the political self-consciousness of the ordinary citizen has been profound. The stability of the republican government is in marked contrast to uneasy oligarchies elsewhere in the Middle East, some of which emerged from the Second World War as Turkey did from the First.

Hitherto I have been trying to sketch Turkey's roller-coaster entry into the world of the twentieth century from the viewpoint of a sympathetic westerner and a Christian. Though I never happen to have heard one of them say it in so many words, I suspect that from the viewpoint of the Turk himself, all of the changes which have taken place in a lifetime can be considered aspects of the change in the official status of Islam in Turkey, from the state religion to merely the religion of the majority. To be a Turk is to be a Muslim and this is true whether he is a pious and conservative peasant or a skeptical intellectual who hardly knows the rudiments of the inherited religion which he wears as a label. But in the Muslim world-view, the proper law of the state is the law of sacred scripture: whereas Turkey at a stroke replaced this with the legal codes of the western democracies. In Islam, education is clerical education: whereas the early Turkish republic closed the religious schools almost entirely and forbade religious training in any school, Christian or Muslim. Traditional Islam (though not, be it admitted, the canonical doctrines) gives a subordinate place to woman and, partly for her own protection, sanctions polygamy: modern Turkish women have almost equal status with men, and monogamy is the rule. Islam was once the state religion, with secular and temporal authority centered in the hereditary autocrat; today political authority is vested in an elected

government, and Islam, while professed by the overwhelming majority, has no special legal privileges. Since the fading of its mediaeval, militant expansionism, Islam has had a besetting tendency to fatalism and obscurantism; the Republic is more in the tradition of the French Enlightenment and is trying to spur its people into improving their circumstances by their own efforts.

Without making sweeping generalizations about Islam under all circumstances, it is undoubtedly true that its dominant influence in Turkey at the time of the revolution was reactionary, as the above examples indicate. It was therefore inevitable, if the revolution was to have a chance of success, that the new republic should take secularism—the separation of church and state, as our own founding fathers called it—as a cornerstone of the new structure. Even today, many an educated Turk, while instinctively recoiling from atheism or from formally changing his religion, is nevertheless repelled by Islam as he has known it; it means little or nothing in his personal life. Many others still find much solace in the old forms and doctrines, while a few are groping toward concepts of revitalization and reformation. Meanwhile the great mass of the common people follow the old faith in much the old ways, accommodating themselves, like their forefathers, to the vagaries of an earthly world which is less important than the hereafter.

But the ferment is there. From the Muslim viewpoint, a contradiction in terms has been actualized: a secular Muslim state. Moreover, it has been a staggering success. Not only in Turkey, but throughout the Muslim world, this unprecedented phenomenon is bound to exert a magnetic effect on the thinking of national leaders. What can be learned there can be used elsewhere, and at the same time what influence we as representatives of the west may exert there will spread far beyond Turkey's borders. Where we can come without arrogance and with genuine good will, ready to learn as well as to help, we have a chance to serve in one of the

strategic areas in the modern world.

Amid all this change, the role of the physician and the health needs of the people have not remained static. Comment on four diseases may serve to illustrate.

As a child I heard stories of the cholera epidemics which used to sweep Turkey down to World War I. Mother told me how one of the students at our school in Tarsus ate some chick-peas in the market one evening and was dead within thirty-six hours. And one summer the whole student body and faculty of our girls' school migrated to the mountains, in a long horse-caravan, to escape the cholera epidemic which was devastating the coastal plain. Before the auto road was built I myself have often ridden that trail and can picture the scene, but only in imagination, for I have never seen or heard of a case of cholera in my own experience.

Not too rarely one sees the faces of older or middle-aged persons scarred with the residua of smallpox. Even our maid in Ankara, though only twenty-eight, bore these scars. But vaccination is now known and practiced in the remotest village, and when word spread about the teaching hospital where I worked in Ankara that a case of smallpox had been admitted, we all crowded to see it with the same curiosity that would be manifested on Longwood Avenue.

Malaria once helped to depopulate the Cilician coast where the ruined Roman aqueducts and theatres arching over the modern highway speak of a vanished community of wealth and culture. In my own time its helpless victims have been seen lying in the streets and gutters of Adana. But in my practice there from 1951-54 I diagnosed it only infrequently. Most of us there sleep on the flat roofs in summer to escape the heat, and a mosquito net has always been indispensable; yet last summer I was troubled less even by pest mosquitoes than we have been here in the Boston suburbs this year.

It is tuberculosis that is now the ravager, the terror that people shrink from mentioning by name. How often have I heard patients ask me in

fear, "Doctor, do I have a bad disease?", when I know and they know that it is *that* disease they mean. I do not know whether its incidence has absolutely or only relatively increased, but the brutal fact is that for many, death is far cheaper than life at the cost of months of treatment and of economic helplessness. Streptomycin, para-aminosalicylic acid and isoniazid are available and are changing the picture, but this is a problem which will be with us for a long time. Here in the States it was with amazement that I heard of the closing of the Trudeau sanitarium because it was no longer needed. While America is going down the far side of the hill, Turkey has but set her feet on the lower slopes of the ascent.

Meanwhile there has been, I would imagine, no great change in the very widespread incidence of intestinal parasites like taenia and ascaris, and in the prevalence of one form or another of malnutrition, both expressions of poverty and ignorance.

The situation in the health field, therefore, reflects the transition from a predominantly agricultural, technologically almost mediaeval community toward urbanization and industrialization, with its increased crowding and its improved technical facilities for the control of disease. Tuberculosis stands out as a problem because its solution is not merely one of medical technology but of social and economic adjustment.

With this it hardly needs emphasis that the medical profession of Turkey, inheriting its traditions from French medicine, though differing from us in some respects is still in the same main intellectual stream as our own. There is no question here of foreign physicians having to deal exclusively with an entirely alien tradition of witch-doctors and superstition, as for example in parts of Africa.

The main difficulties of medical practice, aside from the deficiencies in hospital facilities, arise from two tendencies of the lay public: doctor-shopping, and the "one-shot" relationship with the physician.

The isolated village, in its simplicity and often its stark poverty on a



The difficulties of keeping in touch with one's patients

bare subsistence level, has been least touched by the revolution's effects on every phase of life. Many of your patients cannot see you every day or even every week, they cannot telephone you, (do I hear a sigh?), and they tend to think that if you can't cure them the first time around you're just another quack. "We'll have to study your case a while," is something you simply can't say to most of them.

Trying to bridge this gap of communication, we started an amateurish visitation service in our urban clinic. My wife and our nurse visited outlying villages by jeep. Having had to abandon the latter for rescue by tractor, and having even left one of her knee-boots in the too-affectionate clay, my wife finally reached the bedside of a patient whom she chided for not having kept in touch with me. She was told, naturally enough, that she ought to know only too well why the patient had not labored through the mud to the city.

On the other hand there was a young woman, seriously ill with dysentery, whose family had given her up for lost after a single visit to the clinic, though they lived on the edge of town. When the visitation team discovered the patient's plight and convinced the household that further measures remained to be tried, they were able and willing to hire a taxi

and come in at once. The patient recovered promptly on aureomycin, once the idea of permitting the minimum kind of follow-up had been got across.

Medical services to the vast rural majority of the population are thus caught in a vicious circle. Physical isolation begets poverty, stagnation, and the absence of most of what would make it attractive for a doctor to settle and practice there. At the same time the economic and social burdens of ill health hamper the villager from raising his own level. The infant mortality in the villages is said to be 30 per cent in the first year of life, but what is the meaning of a statistic like this in human terms? Among other things it means that many women are worn out with childbearing at thirty and are old in their forties.

Just as vascularization is a prerequisite to healing in tissue, so the constantly spreading network of truck and auto roads is affecting the status of the villages. Not only do goods now travel in both directions with far greater efficiency, but men and ideas circulate and penetrate as never before. The help which the United States has given in the development of a road program is one of the soundest investments we have made in Turkey.

What has all this to do with medi-

cal missions? First it should be understood that, on the medical side, missionary medicine is no longer primitive and makeshift but is quite compatible with professional self-respect. Second, on the missionary side, it is no longer "evangelistic" in the Billy Graham sense. Neither is there any exploitation of a captive audience. Christian experience and belief, and the conviction that at the core of Christianity there is something as universal as it is indispensable to a full life, are as central as ever. As Protestants, we think in terms of Protestant Christianity; but we have learned to be wary of trying to export that which may be merely particular to our own land and culture. The basic purpose is that of meeting the needs of people, starting from wherever they may be.

On these premises, missionary medicine is relevant to the current situation in Turkey on at least three points.

First, one of the needs is for technical competence. Not to affront the many skilled and devoted Turkish physicians, the fact remains that to train doctors and to make them available to the people who need them costs money, and the Turkish community as a whole is not wealthy. University classes are large and laboratory facilities are meagre by American standards. Moreover, it is not easy for an unsubsidized doctor

to support a reasonable standard of living for himself out of practice among the population that needs him most.

With a Turkish colleague I visited a government hospital which is adjacent to our mission hospital in a southern town. I was tremendously impressed to overhear members of its staff telling my friend—not, it was clear, for my benefit—how in spite of understaffing and overcrowding their own standards had been jacked up by the presence of the American hospital.

Meanwhile my own furlough is being prolonged in order to make possible some advanced training in a sub-specialty, every bit of which I expect to need in order to carry my responsibilities in the teaching post to which I shall return.

Second, medical missions are part of the general process of elevating the status and worth of the common citizen, for improving his health and stamina is indispensable to making him an heir and participant in the progress of his time. The mere habit of treating patients, one by one, not as statistics in an institution but as individuals, each in his own right, has a cumulative effect in strengthening that view of the individual which is so much a part both of Christianity and of democracy. The pathetic gratitude, the sense of discovery with

which people respond to such treatment has illumined many a hard day's grind.

I remember a patient with tuberculous osteomyelitis. To her surprise, after she had attended the clinic our nurse "took the trouble" to look her up at home and check on her progress. Poverty and ignorance had almost entirely prevented her from buying and using the streptomycin and isoniazid which had been prescribed, and her old crone of a mother was murmuring fatalistically that it was all the will of Allah anyway and that nothing could be done. But a young man in the household spoke up sharply to contradict this view. "It is not the will of Allah that she should remain ill and die if something can be done about it, and these people say there can." Catalyzed by a little individual concern expressed with technical competence, these people were ready to stir out of their fatalistic lethargy and do their own share.

Third, missionary medicine is one of the most direct and easily understood forms of the exportation of practical good will. In a rapidly shrinking world we Americans are exporting a great many things, from wheat and machinery to techniques and ideas, not to speak of much hard cash. Our own deepest purposes will not be served unless we also export men and women of good will, and this cannot be left entirely as a function of government. To many and many an individual, the rapid changes described above mean personal bewilderment and a clash of values. The missionary, with his longer stay in the country, has opportunities denied to the embassy worker or the technical assistance expert, to make personal friends, learn the language and customs, and help interpret to such people the conflicting influences which torment them. To combat international tensions and intercultural misunderstandings, to create an atmosphere of trust and constructive cooperation, nothing is so effective as a person. When this person is skilled and devoted in the arts of healing, he speaks a language almost impossible to misunderstand.



The writer's father visited this patient, buddled on the floor of her cave home

Science Invades Clinical Medicine

Joseph C. Aub, '14

A student goes into medicine or works with doctors because he is interested in man, and whatever clinical field he may enter, this interest will remain dominant. The medical student spends one and a half years in the fundamental sciences and these are his only required exposures to the laboratory side of medicine. From then on he is taught by those primarily interested in the ills of man. There follow years of internship—and if we are not careful we make medicine during these years a trade rather than a profession.

With the rapid progress being made in the medical sciences, we clinicians have a responsibility to apply this to the benefit of our patients. Our development must conform to this age—the understanding of the mechanisms of disease. It cannot be conceived adequate if it is simply the description of disease—the preoccupation of the last century. Mechanisms in a complex living organism are complicated and hard to unravel. But this generation has become dedicated to this and no one need apologize for the attempt. When the subject involves man, this of necessity leads to close collaboration of the preclinical scientists and the clinicians. The importance of this collaboration underlies what I have to say today.

We have come a long way on this course in a short time. The great urge to do research work in clinical medicine was really stimulated here by Dr. Edsall, the dean who later made Harvard into a national rather than a local school. Speaking of his early medical training, he wrote, "In research I drifted almost completely for a couple of years without accomplishing anything immediate. It was only when I fell into close association with a man who had training in advanced methods of research that I began to make any progress. Obviously the most important thing to do is not to work alone or in casual contact with some other person, but to work in immediate association with a man of ability and excellent training and thus to have daily contact with his methods of thought. At the time I am speaking of this was difficult, for there was almost no one of that sort in this country doing research in clinical medicine. Really serious investigative work, other than straight clinical or pathological casuistic, was even thought by many of my seniors to be likely actually to interfere with a man's career and mark him as impractical."

When I had finished my residency at the Massachu-

setts General Hospital and had been through the first World War, I was contemplating going back to physiology and was told by both Dr. Richard Cabot and Sir James Mackenzie not to do so, because it would probably ruin me as a clinician. They considered it too remote from the diseases of man. I disregarded their advice, and have always thought that those six years spent in physiology were most valuable and made me a better clinician. These years changed my orientation towards disease into a fascination with mechanisms but I remained just as interested in man and his general problems.

Clinical research work in the modern sense started in America at Johns Hopkins. Much research work in pathology had started in Boston just before the turn of the century under Dr. Councilman at Harvard Medical School and Dr. J. Homer Wright at the Massachusetts General Hospital. In the medical clinic it started just before and expanded somewhat after the first World War, almost forty years ago.

This is not the place to summarize scientific discoveries related to medicine of these years. One has only to think of a few facts to realize that more rapid progress has been made than ever before in history. Therapy has passed through the nihilistic era started by Cabot to the wealth of potent drugs, including antibiotics, which are available today. Our growing knowledge of viruses, of vitamins, and the internal secretions are examples of the progress. But the most exciting development to me is the chemical dissection of body cells which is now vigorously underway.

In my medical lifetime metabolic studies have progressed from analyzing the urine, feces, and breath of animals including man, to studying the levels of metabolites in the blood, and in the last ten years to analyzing the chemical anatomy of the cell and unraveling the enzyme or endocrine systems which help accomplish the miraculous cellular reactions which produce energy and maintain life and health. This last activity reminds me of a quotation from a sermon by Cotton Mather—December 19, 1689, "Little things which our naked eyes cannot penetrate into have in them a greatness not to be seen without astonishment. By the assistance of microscopes have I seen animals of which many hundreds would not equal a grain of sand. The whales, me thinks, are not such wonders as these minute fishes are."

And now that the body cell is chemically falling apart one realizes anew that the smallest structures are overwhelmingly beautiful and miraculously constructed.

After the first World War, a small but slowly increasing number of young men chose to do investigative work in the clinic. From this group have come many of our present professors of medicine. Whereas during this period the number of men who thought it wise to study further in the fundamental sciences was relatively small, a great increase has come after the second World War. I do not think it was caused entirely by the influx of money which has been poured into certain fields of medical research, because it antedates this. In the last years relatively large groups of doctors, already well trained in the clinic, have dedicated themselves to fundamental study and returned to the physiological and biochemical and pharmacological laboratories. From about 1946 on the large amount of money poured into this field has of course increased this activity.

Antedated by the polio myelitis March of Dimes, and the T. B. Christmas seals, the American Cancer Society ten years ago opened the flood gates of public giving to medical research, and similar drives in specialized fields have subsequently been successful. The government has also undertaken to support medical research, particularly through the Public Health Service and the AEC. These annual grants are now large and continue to increase. Table 1 indicates this rapid growth.

TABLE I

MEDICAL RESEARCH FUNDS ALLOCATED BY
VOLUNTARY HEALTH AGENCIES

	Total Funds Raised in Millions	Funds Allocated Medical Research
1944	29.5	1.4
1949	68.9	7.5
1953	127.8	13.4
	Federal Government Spent	
1952		33.0

These funds are distributed for scientific projects which after a few years have to be re-evaluated. As a result they cannot be counted upon for an indefinite period. The facts that scientific technique had developed adequately, that progress was needed in clinical medicine, that teaching required more knowledge, and that money became available for support all combined to increase scientific medical activities. The development has in large part stimulated younger clinicians, and its magnitude at Harvard can be approximated by comparing some clinical Medical School appointments below faculty rank in the years 1942 and 1952.

During these few years new laboratories have been equipped, and the development of research in the hospital has had a tremendous crescendo with excellent groups of the best minds dedicating themselves to this work. The modern trend is to try to understand the

mechanism which produces or is produced by disease. In this age would it not be a calamity if our young doctors were ill qualified to understand the advances in knowledge which are occurring with ever increasing frequency?

TABLE II

HARVARD MEDICAL SCHOOL
NUMBER OF CLINICAL APPOINTMENTS BELOW FACULTY RANK
(Instructors, Research Associates, Assistants, Fellows)

	1942	1952
Medicine	79	203
Surgery	76*	105
Neurology and Psychiatry	47	118
Pediatrics	41	93
	<u>243</u>	<u>519</u>

*35 on leave of absence

We now know that good work can be done in the clinic. It is harder to complete than is fundamental work in the preclinical sciences, for the distractions which involve patient care and also clinical teaching are obvious. But that it can be well done is evidenced by the continued improvement in clinical research. Results presented to annual meetings devoted to the preclinical and clinical sciences are not dissimilar, and the work in hospitals gets progressively more oriented to very fundamental problems, so that there has been a rapid decrease of difference in quality of the publications which come from the better laboratories of all departments. For techniques are no longer departmentalized. Biochemical studies can be made in the departments of Anatomy or Pharmacology or Surgery, and when a new technique is devised it becomes available to well-trained scientists in any department. There is a continued need for separate laboratory departments but based upon the specialized teaching they have to do rather than on the type of research.

The M.D. degree has the disadvantage of a long training, some of it rigidly prescribed by the specialty board requirements. This tends to lengthen the training period inordinately. Many men who have acquired this knowledge and have used it effectively in research are reaching ages when important decisions in regard to their futures must be made. The time to face the unsolved problems of this acceleration in research is upon us. What shall we do with these highly trained, productive men? The problem is no longer one of laboratory facilities; this is largely solved. The main problem is the future of the men who dedicate themselves to research and this should include men with a Ph.D. training who have joined in these investigations. The Ph.D.'s. certainly orient the problems to a more fundamental approach and are a large factor in the success of the movement. A Ph.D. has advantages over the M.D. degree for the training is shorter and more intense, and for them there are many fewer distractions in the hospital: These men, some Ph.D.'s, some M.D.'s, some in

biophysics, others in chemistry and physiology, are doing their fundamental work away from the departments specifically dedicated to their specialty. They are therefore not in direct line for promotion in their proper departments. They are working with temporary funds given for projects or for fellowships. This is a technique which gets work accomplished—but which neglects the broader aspects of a man's career. Grants use a man but do not put him on the academic ladder. The new development is so important we wish to continue to welcome men into prolonged postgraduate training and research and there should be prospects of placing the best in suitable positions. The present, and I think temporary, trouble is that the university and hospital do not have the funds, and so are unwilling to assure prolonged financial support, and hence restrict academic promotions.

Until a technique can be worked out, these young investigators, who are now in full flight in their chosen fields, continue insecure. From these men come the university teachers of the present and of the future, and some of them are sure to be the real leaders of this generation in clinical work. They deserve respectability in title and salary. The university resists giving them respectable appointments, while the hospitals want to conform with the medical schools and are facing the same difficult financial problem. Research on human disease, to be fully effective, must involve a collaboration of school and hospital throughout.

While this vast increase in young men is concentrated largely in the new clinical laboratories, there are also many getting advanced training in medical school laboratories. These young men constitute a new problem of no small magnitude in postgraduate training in all departments. But we have no analogous increase in number of older men to direct the young investigators into profitable channels. Professors were worked hard enough before; now their load has increased enormously not only in this added and difficult teaching, but in finding positions for their men and in getting financial support to continue the laboratories. They are grossly overworked, and the position has acquired a heavy administrative load. Help for the professors could be obtained by more adequate positions for younger men in every department, a solution which would be mutually welcomed.

Of course our administration is wrestling with this important problem. Dean Berry's remarkably clear exposition of the finances of the Medical School in the April 1955 Medical Alumni *Bulletin* shows the great need of assured income for every purpose in the School. The income of the School has risen in the last decade, but as he points out, has not risen enough. He has defined the problem so lucidly it needs no further discussion here, except to point out that this is the main deterrent to increased university promotions. It appears fairly safe that these outside research funds will con-

tinue to be available, probably in increased amounts. Yet the societies and government services which distribute them say they cannot promise money they do not have, nor can they justify putting aside money for the future use of tenure appointments, though promises of three to five years support are now given to seasoned workers. I think this could be partially corrected if the national organizations which distribute funds would allocate their first funds to a priority list of universities and hospitals which, in turn, could use these for the tenure support of their ablest men. I think no institution could think such money insecure. At present, schools and hospitals are finding it hard to accumulate endowments for Professorships, so the problem remains unsolved and the present system may have to be curtailed, which would I think be a calamity. Younger men cannot be expected to go on forever on annual grants, with continued lack of academic recognition. Yet the development of fundamental medical research is essential, and it nurtures the pool of scientists the country demands so volubly.

What can be done at a local level?

It is obvious that any plan should be one which involves both school and hospital. If the hospitals are made to carry the whole burden, it weakens the inter-relationship so important to both. In the hospital, titles should be given which clearly distinguish between academic and routine work. This is particularly important for those with either the Ph.D. or M.D. degree who work in the laboratories and not in the clinic. In the school, titles should be more readily available to these men in the preclinical departments to which they belong. This would give such men breadth of interest, and involve teaching their disciplines to students. This I appreciate is hard to arrange, for, after all, a professor has a right to supervise the work of men in his department and gets little pleasure from men working in remote laboratories. If, then, this arrangement cannot be engineered on an adequate scale, then a new department with some such broad title as *Research Medicine* should be expanded to include the men with unusual disciplines working in hospital laboratories. The academic title is less important to men working in the clinic as well as in original work—they should continue to compete with those able men dedicated to the practise of medicine, some of whom also teach and also deserve promotions.

It always appears that finances are the main stumbling block. It is obvious that higher academic appointments require endowments, and that to keep these young men at academic activities will require money. If this is not obtained, it is obvious that this wonderful stock pile of able, mature men may gradually drift away from full time academic medicine. But I am convinced that this problem can, indeed must, be solved and that the valuable developments now in progress will continue and even grow.

Editorial

HELP FOR THE MEDICAL SCHOOL AND ITS ACADEMICALLY ASSOCIATED HOSPITALS

A new milestone in the support of medical education was reached when the Commonwealth Fund announced on November 27 the distribution of \$7,150,000 in unrestricted gifts to ten medical schools. The Harvard Medical School received \$1,000,000 of this total.

The most significant aspect of this gift is the fact that it was made not from current income but from the Commonwealth's capital assets. This invasion of capital emphasizes the Fund's grasp of the essence of the problem—the financial stringency of medical schools today. The second telling condition of the gift was its unrestricted nature. This is practical endorsement for the medical schools' plea that unrestricted support is their primary need.

This should not detract from the value of restricted research grants. They are of critical importance for the advancement of medicine. It merely takes cognizance of the fact that today's unprecedentedly large support of specific research by industry, especially the pharmaceutical houses, foundations, and the government, has created a besetting ill of academic life—"projectitis". Research projects gather impedimenta as they gain momentum, and the strain of paying the indirect costs of a complex research program has drained the resources of inflation-weakened schools.

The public demands new knowledge into the causes of disease, and is willing to pay handsomely for the investigations required. Grants to underwrite such investigations, however, far outweigh the sums given with no strings attached to the schools for their basic academic operations, their "bread and butter", so to speak. The public also wants future doctors to be well trained. Meanwhile, the cost-spiral is pinching the schools' resources in its coils.

In offering unrestricted support, the Directors of the Commonwealth Fund emphasized "... the compelling need for medical schools to clarify their educational objectives in the postwar world (and explained that it was providing funds)

to help them to institute or to maintain creative programs in medical education." The Dean of the Medical School has said that Harvard will use its new \$1,000,000 to strengthen education in the basic sciences, for it is here that the future doctor begins to build knowledge about the effective treatment of disease.

Just as the *Bulletin* goes to press, the educational world is rocked again. On December 12, the Ford Foundation announced gifts totaling \$500 million to colleges and universities, medical schools, and hospitals. The \$210 million allotted to undergraduate institutions is to be used "to help them strengthen their instruction" by increasing faculty salaries, and the \$200 million the hospitals received is designated "to improve and extend their services". Harvard Medical School's academically associated hospitals will receive about \$1,500,000 with which to broaden the scope of their patient services, teaching, and scientific investigation. This is reasoned philanthropy.

As yet, the stipulations of the gifts to the medical schools have not been disclosed. However, it is inevitable that its share will permit Harvard to create better learning opportunities for medical students, while simultaneously promoting the endless search for new knowledge.

Commonwealth and Ford have pointed the way. Were the public foundations—those which secure funds for attacking certain diseases by annual public solicitation—to follow the lead by allotting portions of their yearly incomes to the medical schools, their ultimate objectives would become more attainable. One cannot erect a larger and larger research edifice on the sand, but only on the solid foundation of strong schools, the source of trained personnel.

Harvard Medical School can best assure itself of attracting further sympathetic help if the School and the Alumni continue to demonstrate their own aggressive support of medical education. Others help those who help themselves. The enthusiastic participation of 57 *per cent* of the School's graduates in last year's Alumni Fund effort is evidence that they believe in the need for unrestricted money. By increasing their participation year after year, the Alumni can prove their faith in the future of medicine, and set the pace in assuring that it be bright.

Complacency is the greatest danger. Already, we have heard the ill considered comment that these gifts diminish the need for Alumni support. The School needs many, many times the amount it has recently received if it is to achieve the potentialities envisioned for it by the Faculty and the Alumni. We cannot *afford* to rest now.

J. M.

A Visit to St. Mary's

Notes on a Spring Teaching Visit, with Thoughts on Medical Education, Transatlantic Exchanges and a Few Other Things of Questionable Relevance



Charles G. Rob, F.R.C.S., Professor of Surgery, University of London, at St. Mary's Hospital.

About two years ago, on the invitation of Professor Charles Rob, I was offered the privilege of acting as Visiting Surgeon to St. Mary's Hospital and Lecturer at the University of London. The spring of 1955 seemed the best time for the visit. Professor and Mrs. Rob were our guests in Brookline when he was the Visiting Surgeon-in-Chief Pro Tem at the Brigham in 1952; Mrs. Moore was to come on the trip and we were to be guests of the Rob family at Hampstead. We had looked forward to the occasion for many months.

We arrived in England early in May after an unseasonably calm and Carribean crossing of the North Atlantic. During the first five days of our visit we had few official duties save for a lecture at the Surgical

Francis D. Moore, '39

Section of the Royal Society of Medicine on "Endocrine Changes after Trauma." It was on this occasion that I gained the impression that was to grow stronger throughout the visit, that years of educational exchange across the Atlantic bear fruit in terms of personal friendship and community of ideas. The audience was spotted with surgeons, both young and old, who had studied here at the Brigham, passed through as visitors, been here as Pro Tem professors or knew the Harvard community through other associations. Dr. Graham Wilson of Sheffield, who had studied with us two years ago, presented a very interesting discussion, showing the metabolic changes following trauma in adrenalectomized and hypophysectomized man. It was a pleasure to discuss this interesting subject 3000 miles from home, yet among friends and co-workers.

Over the week-end we did some sight-seeing with our hosts. Touring through Essex, East Anglia and the Fens country, we saw an interesting section of England. It included some beautiful scenery, old houses and its due share of cathedrals: Lincoln and Ely. But the high point was a visit to the University at Cambridge under the tutelage of Professor Rob who had graduated there the same year that I had finished at Harvard.

On May 8th the tour of duty at St. Mary's began. Every day there were teaching rounds on the wards, amphitheater clinics, operating, and



White Star

Francis D. Moore, Moseley Professor of Surgery and Surgeon-in-Chief, Peter Bent Brigham Hospital.

visits to the other hospitals of the "St. Mary's Group." The London teaching hospitals all have taken on certain neighboring hospitals which in the past had acted as community hospitals. This permits centralization of their opportunities for teaching. Rounds and teaching sessions at these hospitals were an interesting variant on the wards at St. Mary's. The variety and wealth of clinical problems available for teaching at St. Mary's are unmatched anywhere in the world.

Interspersed with these activities were two formal lectures at the University of London on the subject of "Metabolism in Surgical Care." The large attendance of students and faculty from many of the hospitals and the evident interest in our work was

most gratifying and hospitable. The evenings were busy with dinner parties, student gatherings or music. After two hectic and enjoyable weeks, Mrs. Moore and I took off for Paris, Milan, Naples and home.

The Organization of Surgery. There are so many interesting contrasts between the English teaching hospitals and ours that it is hard to know where to start. The organization of the surgical service at St. Mary's follows a pattern which is characteristic of most of the London hospitals. There are several services in General Surgery, each headed up by a senior surgeon and each autonomous in its ward arrangements and appointments of personnel. One of these units is known as the "University Unit" and is led by the professor, in this case, Mr. Rob. The planning of teaching is carried out through the University Unit and the students are distributed throughout the surgical service by the professor. Other than this, the services are parallel in organization. The great virtue of this system is that it distributes the administrative responsibility evenly and the professor is not saddled with as great a burden in arranging either patient care or appointments of personnel.

The administrative machinery of a surgical service in Britain is, generally speaking, much less complex than the corresponding work in this country. The very different arrangements for financial support and the rather different tradition in hospital research are other things which simplify this administrative task. This system allows the professor more scope for personal participation in surgery and research.

The manner of making appointments for postgraduate education is another detail where differences are immediately apparent. The tendency in this country has been increasingly to formalize and crystallize the procedures in the internship-residency period. Everything done by the American Board of Surgery and the Council on Accreditation has tended to standardize our methods. Maybe

this is one aspect of the great American genius for mass production of similar units, be it automobiles, toothpaste or surgical residents. In this country, the Chief of Service is completely responsible not only for the appointments but also the career-planning of the men under him. This is an awful responsibility, using the word "awful" in its original meaning, namely, that it fills one with awe. It is a responsibility which can miscarry seriously if the Chief of Service does not make adequate use of consultation from other members of the staff and if he does not have a pretty broad, enlightened and unselfish view of the interrelationship of surgery, research, and the specialties. It is an instance where centralization of responsibility has come about because of pressure for standardization; the resulting centralization is good or bad depending on the man. There is nothing intrinsically "good" about the system itself.

In England, these important matters are arranged very differently. Few "house appointments" are made more than a year in advance and very few of them are made for a greater duration than one year. There are comparatively few young surgeons who go to a single hospital and stay there for four, five, six or even seven years as commonly as they do here. They move about a great deal more. Frequently one has his senior registrarship in an institution where he has not worked previously. The virtues of this system are quite obvious in terms of men moving about, learning various approaches and absorbing refreshing views from other institutions. The fault of the system is that a young man is more apt to "drift" and feel the need of a single person as adviser and counsellor.

The surgical operation itself in most English hospitals is very different from that in the Brigham. It is tempting to say that it is quite different from that throughout this country. But there is so much variation over the U.S.A. that such a statement is a little bit too sweeping.

The fact is that in England many of the details of surgery are viewed in a much more casual way. It is not unusual to see anesthesia being conducted without an anesthesia chart; the approach to asepsis and the sterile field is much more informal in most English services than it is in ours.

The standard American reaction to this sort of thing, when seen for the first time, is one of self-satisfaction. One of the beauties of a visit such as ours was that it permitted a little continuity in seeing patients come and go, operating and assisting, and seeing the whole panorama. It is the sort of view one cannot get from a visit of a day or two. And with this background, one gains a more relaxed view about the British approach to surgical detail.

Instead of reaching a self-satisfied conclusion, one is much more apt to question the almost compulsive neurosis with which we approach all the little aspects of surgery which have been perfected or—again—standardized in America. The British view towards many things both in surgery and in research is one of discernment and a desire not to take another's routine for granted. Each objective should be looked at and evaluated on its own merits. A much more characteristic American view is to devote a lot of research and reams of literature to finding certain common denominators or basic procedures. These are then translated into routines. This is usually done by a Committee. Then, after a few years, these originally rational routines become inflexible. One suddenly finds that they are respected because they are routine rather than for any merit which they may at one time have had. At St. Mary's a large volume of difficult surgery is managed with skill and excellent results—employing comparatively few of the techniques that the Harvard hospitals regard as "routine."

Although British surgery has adopted much the same view as we have towards radical pancreaticoduodenectomy, namely, that the indications for this operation are be-

coming ever narrower, it was our pleasure to assist one of the Residents there with one of these operations in a very favorable case, the first he had done. This teaching relationship, which is at the heart of surgical education, is always an interesting and stimulating experience. It is somewhat of a challenge when undertaken in new surroundings. In the frequency with which senior surgeons take their time to assist the younger men in complicated surgery, the Brigham and St. Mary's are very much alike.

Medical Students. This was my second opportunity to see British medical students at first hand. In 1952, as Visiting Surgeon at the Royal Infirmary at Edinburgh, I had seen the Scotch version. Now we saw the English version.

Making ward rounds with the third or fourth year students at St. Mary's Hospital, one is immediately struck with the fact that some of these students have a maturity, experience and breadth of view which is far greater than our students'. Others appear much more immature than ours and have the look that one might expect were one to take a group of college sophomores on rounds.

The reason for this heterogeneity seems quite apparent. Probably I have over-simplified the matter. The fact is that about one third of the students in the London teaching hospitals have had two or three years at Oxford or Cambridge before coming "down to London." The remainder have come straight to the hospital from their secondary schools. They have left school at the age of 18 or 19 and their hospital experience follows immediately afterwards. Then, they spend the first two years at the hospital engaged in premedical studies and the next two years in preclinical studies. These students appear to have a somewhat less mature view towards life in general and medicine in particular than the Oxford-and-Cambridge men (and women).

Here again, a trip away makes us

see things at home in clear perspective. Our system of requiring a college degree before admission to medical school should never be lost in our desire to shorten medical education. The shortening process should come at some more redundant phase later on.

The British medical student, either in London or in Scotland, has to fend for himself much more than do ours. And this he does with great vigor and ability. Students who have made ward rounds in a rather large group—30 or 40—will often be seen that afternoon or evening back on the wards, studying the records or talking with the patients. If the student sees a clinic coming up on peripheral vascular disease, he has to read and scramble for himself to prepare for that clinic. There is much less spoon-feeding and much more individuality in approach.

Surgical technique is not learned by student exercises in the animal laboratory. In fact, undergraduate "dog surgery" is looked at with some reserve by our British cousins, reared in an atmosphere of intense antivivisectionism. Instead, the early steps in "cutting and sewing" are learned in the accident ward. The result is less standard but equally competent.

Oftentimes the London medical student is living his "college years" at medical school. His years between 18 and 22, when he is undergoing a certain intellectual and emotional maturity, are occurring in a medical school rather than in a college. For this reason, the medical school must provide certain aspects of student life which we associate with college. These include a full athletic program. There is a swimming pool in St. Mary's Hospital Medical School, a cricket team, rugby team, crew, and, as all the world knows, a track team, one of whose members cracked the four minute mile.

It was one of the unique pleasures of our visit to happen into London during a busy week of student activities. The annual student concert was held at the Joyce Grove Con-

valescent Home. This is a large country home used as the mansion called "Manderly" in the film "Rebecca". This has been taken over by the hospital as a convalescent home. In its spacious halls are held the annual student concerts. Here again the British genius for discernment, variety and humor in all things comes through so beautifully. The concert included small group singing, soloists, small orchestral groups, the playing of ancient music on forgotten instruments, and the singing of English madrigals by a double octet whose performance was of professional quality. It began in the afternoon with time out for dinner and by late that evening one had the feeling that at least a fraction of the musical talent of St. Mary's Hospital had had an opportunity to express itself.

The United Hospitals Sailing Association is an interesting organization. It is supported by a group of the London teaching hospitals who have purchased an old WRENS barracks on the estuary of the river Crouch. The Crouch is the next river north of the Thames, running east into the ocean. A fleet of about eight dinghies has been purchased by the Association and is kept at moorings in the river. These are 18-foot open lapstrake dinghies. They look something like the M.I.T. dinghies but are larger. They are jib-headed, with roller-reefing gear.

The London hospital students take turns in using the Club-house and the dinghies for week-ends through the spring and early summer. Starting about midsummer, a series of regattas are held in which the various hospitals race against each other.

Mrs. Moore and I found ourselves in the role of crew members for several medical students. Although their nautical terminology was somewhat different from ours, we did not end our day in the cold water; it was too cold to make that very enjoyable. Being mid-May, it snowed that afternoon.

A few races, and a dinner in the evening in the Club barracks finished off the day.

Distribution of Surgical Careers.

The medical school classes are very large. This is particularly true in Scotland, but at the London hospitals also the classes are big. One would have to know a great deal more than I about the ratio of doctors to population in England before going along with the platitudinous conclusion that England and Scotland are over-producing doctors at this time.

But it is certainly a striking fact that the young British surgeon who has finished his registrarship (corresponding to the residency) and who seeks a position in a teaching hospital must "stand in line" for quite a while. I suspect the situation is somewhat analogous to certain aspects of our distributional problem here. Some types of work and some sites for practice are overcrowded whereas others are understaffed.

The "log-jam" of well-qualified young men seeking university positions is very impressive. One has the feeling that the more senior men are doing more surgery each day and covering a greater area of clinical responsibility than they actually need to. Possibly they might better distribute some of this load to the more junior men. Here again a difference between the two countries is rather apparent since it is somewhat more a part of our tradition to have younger men take over large areas of clinical surgery.

On closer inquiry, one finds that the National Health Act interposes here. In this report, I am purposely avoiding any detailed account of the National Health Act; statements on that subject should be reserved only for experienced economists who have lived in England for five years! But in the realm of University surgical organization, the effects of the National Health Act are so apparent that they cannot escape notice. A professor who is in charge of one of the University Services in London cannot populate it with young men as they come along according to their talents, interests, abilities and needs. There is not the easy freedom of coming and going of young uni-

versity surgeons seen in this country. Instead, each hospital has a rather rigid "table of organization."

The reason for this is quite simple, and relates to the financial realities. Each position in a University Service costs somebody money. In this case it costs the taxpayer and the National Ministry of Health another salary. They therefore cannot permit much flexibility. This is an anomalous situation since it is a system not so easy to work as ours, and it is an instance where the British have been forced away from their natural tendency to individualize, and into an inflexible form. At the risk of overstatement, it would be my opinion that the greatest hazard of the National Health Act to British Medicine does not lie in the practicing sphere or even in national economics. Instead it lies in the rigid pattern of University organization imposed during a decade when rapid growth and evolution of clinical teaching and research are going on all over the English-speaking world. As times goes by and experience grows, greater flexibility may be introduced.

Research. On the matter of research, there are interesting differences between the two countries. Surgical research in this country has become a tremendous edifice and it is a common form of tactful flattery for the British surgeon to tell his American visitor that the U. S. A. is far ahead in this division. I am not so sure.

American surgical research is massive; British surgical research is selective. American research writing is often verbose and redundant; British surgical research and writing are succinct and clear. Much of our research is observational and aimless; British research, while much smaller in volume, is clever, imaginative, inductive and in many ways more productive.

St. Mary's Hospital has active research units both in surgery and in medicine and they are building and improving their facilities. The Hospital is bursting its walls and will soon have to move out of its 100-

year-old site in Paddington to some place where there is more space. The Middlesex Hospital also has a new research unit. This tendency to make more facilities and opportunities for young men in surgical research is obviously all to the good, particularly if conducted in the finest traditions of British research.

Transatlantic Exchange. So we may end our essay with a brief account of the Brigham-St. Mary's Exchange. It is hard to know when the first St. Mary's surgeon set foot in the Brigham and started the feeling of congeniality, cordiality and community of interest which exists between the two institutions. The visit of Sir Arthur Porritt as the "Pro Tem" in 1946 and many war-time exchanges between the surgeons of the two hospitals, particularly of Arthur Porritt and Elliott Cutler, laid the foundation.

Our first actual exchange of men occurred in 1949 when Felix Eastcott came here to the Brigham and Eric Rogers went to St. Mary's. Since that time, one of our Assistant Residents has been in London and one of their Assistant Registrars in Boston, constantly. The list of men engaged in this exchange is an impressive one. Mr. Eastcott did his initial work on blood vessel preservation while here and this work has fitted in nicely to the interests of Professor Rob in aortic replacement. Mr. Eastcott has recently been appointed as Assistant Surgeon on one of the services.

British surgeons who have studied with us at the Brigham, in addition to Mr. Eastcott, include Mr. Anthony James, Mr. Martin Brett, Mr. Kenneth Owen, Mr. Lance Bromley, Mr. Archibald Carter and Mr. Graham Henson. American surgeons who have had a year of study at St. Mary's, in addition to Eric Rogers, include John Rowbotham, recently Chief Resident at the Brigham, John Erskine, John Pikula, Robert Moore and Richard Cardozo.

The financing of this exchange has been made possible through the George Gorham Peters Trust and it is the continuing interest of the

Trustees, particularly Mr. F. Murray Forbes, Jr., that has helped this important Transatlantic enterprise to function smoothly. The American going to Britain is designated as the George Gorham Peters Fellow. His Transatlantic passage is paid in dollars but on the far end he is paid in pounds by St. Mary's. His opposite number coming across in this direction has a passage paid in pounds and his way on this end paid in dollars. Details, but the sort of details which make such an arrangement work.

This year, at the time that we were in London, Professor George Pickering was here at the Brigham as the "Pro Tem" with Dr. Thorn. We hope in coming years that

further exchanges at faculty level will be possible. Recently the students have caught the enthusiasm. Two summers ago Mr. Maury Soltes spent an elective month of surgery on Professor Rob's unit. Last summer Mr. E. Martin Spencer and Mr. Thomas K. Hunt had an English experience as part of their Harvard Medical School education and we hope that this coming summer one or two students will also elect this opportunity.

And that leads us to dispose of a final question. It might be asked "Why bother?" or "Why travel?" or, by the more cynical query once asked of me by a senior member of our faculty—"What have we

got to learn by traveling over there?"

The answer should not be attempted in terms of technical detail, since these depend on who is doing the visiting. Clearly, a student is going to learn something different than a member of the medical or surgical staff. I think the best way to put it is by stating that British medical traditions are old, they are effective, the British are an intelligent and wise people; we have much to learn from them. But the greatest benefit to all concerned lies in the intellectual stimulus and hospitable congeniality which arise from a maturing relationship between two great medical institutions and two great nations.

Report on Military Medicine

Dear Dr. Finland,

You have probably heard from Dr. Davidson something of my new job and of the fact that after my first several weeks at it, I was delighted. Now, a month later, I am even more pleased. Except for the very special situation in which the job is tailored for the particular man, I cannot conceive of the Army's having a more satisfactory assignment than my present one for someone at my stage of training. My opinion, I should tell you, is not shared by all the medical officers here. But the dissenters include a resolute pair of masochists who are determined to dislike the Army at all costs, and one or two men who, I suspect, have always been incapable of enjoying the good in any situation, when the bad, however inconsequential, is obvious.

Certainly I would rather not be in the Army. But, if one must spend two years in an alien milieu, against one's will, what could be better than this?—to be kept comfortably busy, under excellent conditions, taking care of the general medical problems of men, women and children of all ages. We have a good physical plant; well-trained enlisted men to handle non-professional chores; enough nurses, a good lab which handles all routine hematological, chemical, bacteriological, immunological, etc., work; access to the facilities of Walter Reed's lab, when needed; a reasonably well-stocked pharmacy;

good radiology department; and an adequate number of doctors, including board-certified surgeons, pediatricians and internists, and—among the civilian physicians employed under civil service—several men who have or have had teaching affiliations with the medical schools of George Washington and Georgetown Universities.

A typical day runs something like this: I arrive at the clinic at 8 a.m. and find a patient's record on my desk, usually someone I have not previously seen. (I have found that it helps the lab. and x-ray department to get their work done more expeditiously to have me see new patients, on whom more studies are likely to be ordered, early in the day; and so follow-up visits are arranged chiefly for the afternoons). After looking through the patient's record, I speak to the soldier at the receiving desk via an intercom system, and request that the patient be sent in. If the problem demands only a limited local examination (as in the case, for example, of adolescent acne vulgaris or an otitis externa), the patient is examined in my office. When a complete examination is required, the patient is sent to the adjoining examining room and prepared and draped by an attendant. The exam table is adaptable for gynecologic exam, and the facilities are available for biopsies. If material is obtained for bacteriology, the attendant takes it immediately to the lab and a

phone report on the smear or KOH mount or hanging-drop preparation is made to me shortly thereafter. When other lab tests are ordered, the patient takes the appropriate forms to the laboratory, which obtains the necessary specimens. If the patient is to return, a definite appointment is given to fit my schedule.

If, after seeing a patient, I feel inclined to step into the clinic library and do some reading on that patient's problem, I do so. A new patient will be sent in to me only when I announce to the desk sergeant that I'm ready for one, or when I have previously scheduled the appointment.

Where consultations are required, the patient may be referred to our own men in surgery, dermatology, orthopedics, rheumatology, allergy, cardiology and pediatrics; or, in other specialties, to Walter Reed. Patients referred to Walter Reed are not lost to me, since I speak with the consultant by phone before sending the patient over and receive a written report from him later, and a phone report immediately when requested.

My afternoon is spent chiefly in seeing follow-up patients. Occasionally, when the load is light, I can travel by shuttle ambulance, which makes half-hourly trips, to Walter Reed, to see any patients of mine who have been admitted as in-patients. Also during the afternoon, lab reports are brought to my desk and I can, if the new information suggests it, request that the patient be called to return immediately or sooner than scheduled. On one or two afternoons each week, the clinic closes at 4 p.m. and we have an hour's

conference, one of us speaking on an assigned or selected topic.

Certainly I shall not see here the pathology that I saw at BCH, and certainly these next two years will not compare in value and personal satisfaction with the two marvelously happy and fruitful years I spent at the City Hospital. But they promise to be vastly better than what I expected. I am delighted and a little surprised at my fascination with the out-patient ills of an essentially healthy population. And, although the inadequacy and inferiority of both formal and informal teaching here are obvious and undeniable, there is an equally undeniable benefit to be derived from my acceptance of exclusive responsibility during the next two years from my continued professional education.

Now for some old news. From the several postcards I've sent to the Harvard wards, you've probably learned that Fort Sam Houston was a superb resort. With the exception of a few congenital malcontents, all of us had a grand vacation. More important, however, was the opportunity given us to adapt gradually and painlessly to an organization which few of us had respected and some of us had feared.

I must say that it all started inauspiciously, to say the least. The group with which I arrived reached San Antonio at about 9 p.m., were herded into several dimly lit and suffocating torture chambers where we were processed by assorted Torquemadas; and then dispatched by Henry Ford's first product to a grim wilderness in which stood a shack that looked like something out of "The Grapes of Wrath". Inside, we found a two-story barn with barely adequate illumination; an O_2 content consistent with, but not conducive to, life; 20 beds to a floor without partitions; each bed designed to support the axial skeleton, with no allowance for the appendicular; no closets; a drinking fountain which spewed forth warm, brown mouth-wash; and over each bed a naked light bulb and at its foot a dirty can marked "butts".

Our first day was spent in a lot of "hurrying up to wait; in filling out unbelievable numbers of forms (all in triplicate, of course); and in standing in line to get into places where we formed another line.

My first view of San Antonio showed a cluttered, narrow, garish main street from which car-jammed side-streets led past squalid shops to other cluttered main streets. The Alamo seemed to have been desecrated less by Mexican soldiers of the last century than by Texas patriots of this one, who had

cluttered its walls with bad paintings, and by San Antonio merchants, who were hawking Davy Crocket shirts at what once must have been an impressive altar.

But within a few days, Barracks #1116 (which I had called Stalag 16) began to seem like fun; our officer-instructors began to prove themselves gracious and competent; the pace became leisurely; and San Antonio became an interesting and attractive city. Our formations, which had initially resembled Times Square on election night, began to look like men marching and, if not well, at least all in the same direction. (Unfortunately, as often as not, it was the wrong one).

Moreover, our classes were usually good and much of the material well worth knowing. The class rooms were clean, modern, comfortable and cool; painted in restful pastel shades; and equipped with comfortable desks. The instructors all used lapel microphones and there was never a problem of hearing. Motion pictures, eye-catching slides, exhibits, demonstrations, plays and all manner of audio-visual aids were employed. The lectures were impressively concise and there was always time for questions and discussion.

We were taught about the special problems of combat medicine by being spectators at a battle, in which troops, jeeps, ambulances, trucks, artillery, and air support acted out the assault upon an "enemy hill"—with the authentic screaming and blasting of ammunition, popping off of flares and shrieking of strafing planes, and some of the actors simulating casualties. From out bleachers on the side of the mountain at Camp Bullis, we watched medical corpsmen and litterbearers attend to these wounded on the side of a hill about a mile away; saw ambulances weave their way through the valley below to the battalion aid station and return again with two casualties headed for the mobile surgical hospital, which we could barely make out in the distance.

We were taught again about the diseases of military importance in the non-combat situation and about the sanitation and administrative and preventive aspects of disaster medicine. But we also learned to read maps, to understand Army publications and to appreciate the supply problems of the Army; we became familiar with the special organizations necessary to sustain combat arms; and we were taught the chores and responsibilities of command; the techniques of personnel management, and the particulars regarding such personal matters as leaves, passes,

special privileges, pay and promotion, reserve training, legal benefits, military courtesy and the wearing of the uniform. By the time we left Fort Sam, all of us were well-equipped to arrive alone at a new assignment, in what would otherwise have been a strange and uncomfortable world, with confidence that we would not do everything wrong, cover ourselves with embarrassment and feel like interlopers at a secret society.

All in all, Fort Sam was worthwhile for us and will, I think, prove to be a good investment for the Army. There were disappointments, of course, but unfortunately, the most striking of these were the antics and attitudes of some of my fellow doctor-officers, who felt themselves to be superior to all of this Army nonsense. Certainly, the Army has been, and is, guilty of many actions and policies unpalatable to the non-military community. And behind the pomp and pageantry lies a hideous machinery which we wish did not have to exist. But, so far, it must, and we—in being good citizens, as well as physicians—must serve it. And since we must, we should, I think, do so thoughtfully, respectfully and with grace.

And (and this takes me back to the beginnings of this letter) we should have, as I am having, a lot of fun while we're at it.

Sincerely

GIL.

Editor's note: This letter was originally written to Dr. Maxwell Finland, '26, by Gilbert Levinson, '53, recently of the house staff of the Boston City Hospital, who has kindly given the *Bulletin* permission to publish his correspondence. It is printed here as a refreshing example of an attitude toward military service which is perhaps not widespread. This approach to compulsory military service can bring nothing but good to both the Army and the author. In all fairness to those of our readers who have served in battalion aid stations in Alaska or as squadron surgeons in Greenland, it must be admitted that there is another side to the coin. Dr. Levinson's assignment has been as fortunate as his attitude. Medical officers whose lot has been less happy and whose outlook perhaps more sanguine will be reminded of an incident in the movie "Up in Arms." Private Danny Kaye, crossing the ocean on a troopship, is looking down on a bevy of lovely nurses in abbreviated bathing suits lounging in the sun around the swimming pool. A grizzled sergeant beside him shakes his head sadly and remarks, "Things weren't like this in the last war." Whereupon Danny in a wistful aside to the camera replies, "And they're not in this one either."

David Cheever, M.D.

1876–1955



Dr. Cheever

Cummins Photo

David Cheever belonged to an era of medicine that has passed, but his influence on American surgery and on the Harvard Medical School endures. He was an anatomist, a clinician, a student of surgery and a teacher of surgeons. His teachings are as applicable today as they were yesterday because he taught the principles of surgery and the facts of anatomy. For years his lectures on anatomy were among the most popular in the curriculum and his Saturday morning clinic at the Peter Bent Brigham Hospital left an indelible impression on many generations of Harvard Medical School graduates. But his principal contribution was in clinical surgery which he taught by example at the operating table and at the bedside. He never slurred over the smallest detail and was intolerant of those who did. Precise observation, a painstaking examination and a deliberate assessment of all the facets of a case

were the preludes to an anatomically designed and gently executed operation.

His reserved and formal manners set him apart from others, but those close to him found him sensitive, charitable and full of a kindly humor. Although careful and conservative, he performed the most formidable operations of his day. He was possessed of an extraordinary equanimity, evident at all times but particularly impressive at the operating table. In an era of surgical *prima donnas* he was reserved and imperturbable even under the most trying circumstances. Always considerate and gracious to his assistants, he was never given to complaint or criticism even when such would have been justified. He was a gentleman, a kind physician, and an accomplished surgeon.

David Cheever was born in Boston, Massachusetts, in 1876, the only son and youngest child of David W. Cheever and Annie Caroline Nichols. He attended Hopkinson's School (later Noble and Greenough) and Harvard College from which he graduated *magna cum laude*. Although not an outstanding figure in college, he had many friends. His clubs included DKE, the Institute of 1770, the Hasty Pudding, and the Delta Phi. His classmate, N. P. Hallowell, recalls that one of his favorite pastimes was to sit around the open fire in the Delta Phi listening to conversations with Professor Santayana. Later he was much in demand as a toastmaster at his class reunions because of his keen wit and fine command of language.

He graduated from the Harvard Medical School in 1901. The July issue of the Harvard Medical Alumni Association BULLETIN of that year contains a full page architect's drawing by George Shepley of the proposed new Harvard Medical School buildings to be erected on Longwood Avenue. This item is preceded by a report of the Committee on the Medical School, the chairman of which was David W. Cheever, Dr. Cheever's father, and is followed by a list of the graduating class of that year. The name of David Cheever, the son, is at the top, average 93.5%. This juxtaposition was singularly appropriate because as father and son no two people were more devoted to the Harvard Medical School and its traditions.

The influence of David W. Cheever upon his son was profound. Ever since a Cheever had served as a surgeon in the Revolutionary War the Cheevers had

been surgeons. They were Puritans, hard working and God-fearing and not given to frivolity or the easy life. David Cheever's father was proud of this heritage. A man of the most uncompromising principles and integrity, he was one of the greatest surgeons of his day, a brilliant ovariologist, a Professor of Surgery in the Harvard Medical School and the seventh president of the American Surgical Association. He steadfastly opposed the admission of women to medicine. All of his charities were concentrated on medicine and medical objectives, principally the Harvard Medical School. Ascribing his success to a peculiar quality of mind, "concentration", he once wrote, "One thing: only one thing: always one thing. A Doctor: only a Doctor: always a Doctor. One School: one Hospital: one pursuit: one profession. That has been my rule and my course."

David Cheever, the son, was a more gentle and more broadminded man. He was a scholar, a fine ornithologist and a quiet humorist. His marriage to Jane Welles Sargent introduced him to what might have been a more sociable and less exacting life than his father's, but this he could not accept. His father's Puritanical influence is shown in his intense devotion to duty, his implacable struggle with a crippling arthritis, his uncompromising integrity, his opposition to women in medicine, his courageous service for many years on the Committee of Ethics of the Massachusetts Medical Society, his long interest in and support of the Boston Medical Library and his devotion to Harvard College, the Harvard Medical School and the Harvard Medical Alumni Association.

David Cheever's medical career began as an Assistant in Anatomy in the Harvard Medical School in 1903 and as an Assistant Visiting Surgeon to the Boston City Hospital in 1905. He was called to the Peter Bent Brigham Hospital by Harvey Cushing when that institution opened in 1913 and served his entire professional career there, rising from the ranks of Assistant in Surgery to that of Surgeon. Like his forebears, when World War I broke out he immediately volunteered for service. In 1915 he served with distinction with the British Expeditionary Forces as Chief Surgeon of the Harvard Unit in Boulogne. It was here that he contracted his first severe attack of arthritis.

Returning from France, he accepted the arduous duties of Acting Surgeon-in-Chief when Dr. Cushing took the Harvard Unit overseas as Base Hospital #5 in 1917. He rose progressively in the ranks of the Medical School, being appointed Assistant Professor of Surgery in 1917 and Assistant Professor of Surgical Anatomy in 1918. He was appointed Associate Professor of Surgery with life tenure in 1922 and Professor of Surgery Emeritus in 1939. No man could have served an institution with more sincerity and loyalty.

Dr. Cheever was not an original investigator nor was he a prolific writer. His pen, like himself, was reserved, thoughtful and precise. He deprecated the tendency to

rush into print and to publish and republish the obvious. What he wrote, he wrote beautifully in exact and carefully selected English. Of his total of over fifty contributions on medical subjects, several are classics. He performed massage for cardiac arrest in 1905, nearly fifty years ahead of his time. His technique of exploration of the common bile duct published in 1929 is his only contribution on this particular phase of biliary surgery, but it is the standard procedure throughout the world today. His personal results in the operative treatment of gall stones were the best of that era. His paper on carcinoma of the colon written in 1936 and covering the experience at the Peter Bent Brigham Hospital since it first opened its doors is still regularly quoted in all authoritative reviews of this subject. Dr. Cheever's personal mortality for primary resection of the right colon in the pre-antibiotic and pre-transfusion days is comparable to current mortality rates for this operation. His essay on "Anatomy Eclipsed" read before the American Surgical Association in 1933 is a model which every surgeon and educator can read with profit.

His memberships included the Boston Surgical Society of which he was president from 1932 to 1934, the New England Surgical Society of which he was president in 1930 and the American Surgical Society of which he was president in 1940 as his father had been many years earlier. He was a member of the Society of Clinical Surgery, the Interurban Society, and the Société Internationale de Chirurgie. He was a Fellow of the American Academy of Arts and Sciences and of the Massachusetts Historical Society. His honorary memberships included the Royal Society of Medicine in London and the Society of Surgery in Argentina. He was the Bevan Lecturer of the Chicago Surgical Society in 1939 and the Balfour Lecturer at the University of Toronto in 1941. A staunch alumnus of the Harvard Medical School, he was secretary of the Alumni Association from 1905 to 1911, a member of the Council from 1912 to 1916, and again in 1920. The Boston Medical Library was one of his major interests. He contributed generously to it and served as a Trustee in 1939, as President from 1942 to 1945, and as Chairman of the Board in 1944 and 1945. From 1933 to 1936 he was Director of the Harvard Alumni Association and Vice President in 1936. From 1940 to 1946 he served on the Board of Overseers of Harvard College.

When one considers that throughout most of his professional career he was partially crippled with arthritis and never entirely free from its symptoms, his contributions and his vigorous activity in many organizations represent an extraordinary accomplishment.

His latter years were saddened, first by the untimely death of his wife and later by the inexorable progression of his arthritis. Despite ill health, however, he came out of retirement to serve effectively once again as Acting Surgeon-in-Chief at the Peter Bent Brigham Hospital during Dr. Elliott Cutler's absence in World War II. This responsibility weighed heavily upon him.

He derived the greatest satisfaction from it, however, and it was a bitter blow when progressive ill health forced him to resign. In his last years he suffered greatly, becoming literally a prisoner of his disease. Characteristically this was borne with a remarkable fortitude and cheerful equanimity. Family gatherings of his children and grandchildren, especially at his big summer home in Wellesley gave him great pleasure. He was particularly pleased and proud when old friends and former pupils called upon him. Although these visits constituted a great physical ordeal for him, he would never permit Miss Sheridan, his faithful nurse and companion, to keep such visitors away. On these occasions over a cup of tea (which Dr. Cheever secretly despised) many a former resident looked out over the wide expanse of green grass to the beautiful trees beyond and recalled the gay October days when Mrs. Cheever was alive and that greensward was full of Brigham house officers and Cheever children on the perennial occasion of a surgical house staff outing. He

must have had the same thoughts, but he never alluded to them because even in his declining years David Cheever did not live in the past. His interest was in the present and in the future. What was new in medicine? What was going on at the Peter Bent Brigham Hospital? What were the current interests of the surgical staff? What about the new Alumni Fund? He studied the reports of the President of Harvard College and of the Boston Medical Library with the same keen interest which had characterized his earlier years. Until a few weeks before death he regularly read the *New England Journal of Medicine*.

He was released from his infirmity by a gastrointestinal hemorrhage on August 13, 1955. Truly it can be said of him, as it was said of his father, "a distinguished surgeon, a reliable physician, a clear thinker, a loyal member of our profession, a good citizen, and a trustworthy friend, you have occupied many responsible positions and have never been found wanting."

J. E. D.



DAVID CHEEVER

RITUAL CHIEF OF A SURGICAL TEAM;
METICULOUS TOUCH IN A CAUTIOUS REGIME.
DEVOTED TO HOSPITAL, SCHOOL AND TO FRIENDS;
HOLDER OF STANDARDS, BUT TUNED TO THE TRENDS.
WITTY DECLARER TO MEN OF THE LAND;
MASTER OF TOASTS, WITH HIS CLASSMATES AT HAND.
HUMOROUS TWINKLE BEHIND THE FACADE;
JOY IN THE MAKING, WITHOUT SELF-REGARD.
PROFOUNDLY FORGIVING AND TOLERANT TOO;
SKILLED IN THE COOLING OF FACULTY STEW.
MOULDER OF MEN AND OF MEDICAL THOUGHT;
CORDIAL AND UPRIGHT TO THOSE THAT HE TAUGHT;
ENRICHING EACH HUMANITARIAN GOAL
BY EXAMPLE AND PRECEPT AND GOODNESS OF SOUL.

H.R.V.

SOME OBSERVATIONS ON THE ATTITUDES AND MOTIVATIONS
OF THE
Harvard Medical School Student

Dana L. Farnsworth, '33

HENRY K. OLIVER PROFESSOR OF HYGIENE

The search for the ideal education for the medical student will probably never be ended, and if such an eventuality should ever come to pass at Harvard or elsewhere, the result would be tragic indeed. If we could maintain a medical school in which a liberal proportion of the faculty members and students were actively discussing the philosophy and methods of education with one another, while the education itself was proceeding, we would be very fortunate indeed. As I look at the medical education scene from a relatively fresh viewpoint, it seems to me that the one opportunity which we have not used to the greatest advantage is that of considering the students' own viewpoint about the educational process in which he is so intimately involved.

This is not to say that the student knows best how and what he should learn or be taught. It does suggest that the philosophy that the faculty knows best has certain limitations. A combination of the wisdom and experience of the faculty, altered by an acute and sensitive awareness of how the student is thinking and feeling about his transition from a student to a physician, the process being carried out in hundreds and thousands of informal and formal interchanges, would seem to me to be productive of the highest quality of education. Many might say that this is already going on at Harvard. True, it is, but not to the extent that it should. To improve our educational offering in this respect requires much thought and much

work, but it gives promise of adding to the effectiveness, satisfaction and enjoyment of the medical school years on the part of the student. To an even greater extent it would add to the enjoyment and professional growth of the faculty members who participate actively in the give and take of such a change in emphasis in our scheme of education.

It is an emotional problem of great magnitude on the part of a developing physician to get him to assume the responsibility for his own intellectual and professional development. The idea that excessive pressure is the best way to get a man to work at his best is strongly ingrained in our thinking. There exists the possibility, however, that too much pressure in the form of rigid requirements, frequent formal examinations, or extensive fixed lecture systems, may not fit a person to use his time wisely. But let us look at what students say and think about what is happening to them.

Probably the only statement that I will be able to make about them that cannot be seriously challenged is that the attitude and motivation of every one of the 540 students here is different. In the very best of the phrase, they are a motley crew. They are alike only in that they are all good in many different ways. For the most part, their liabilities are overwhelmed by assets, a fact that becomes crystal clear when one tries to teach in a poor school with poor students.

Why did they want to go into medicine? They have all been asked

this question dozens of times. Most of them do not know. Many of them have developed rational answers to satisfy those who ask the question. Those who feel comfortable in what they are doing usually come up with a combination of traits such as that of wanting to be of help to other people, a desire to understand themselves better and a native interest and talent for science in the broad sense. A very considerable proportion, about a fourth, have physicians in the family, usually the father, and hence have tended to identify with them. Others have had a great curiosity about the workings of the human body and have sublimated it in this way. Some saw in the medical career a way of advancing rapidly, socially or financially. Whatever the original motives may have been, definite or vague, it does seem probable that some reflection on the role of the physician in our society, shared by the young and the somewhat older colleague, aids in fitting together an adequate concept of one's self during those last two years of medical school.

Talcott Parsons has said that the physician stands at a strategic point in the general balance of forces in the society of which he is a part. People want so much to believe the best of their physician, even though at times they try our patience by spreading the worst they know, frequently untrue or distorted. Unfortunately something is happening to the medical profession, or at least what people think of it. Our hon-

ored place in the respect of the people is being threatened. We are accused of being too much preoccupied with financial gain. Difficulty in obtaining medical consultations at night gives rise to much dissatisfaction. Our reluctance to take the lead, as a profession, in seeing that medical care is available to all who need it, doesn't help our standing. The new physician looks upon these matters with much interest, some dismay, and with an idealism not reinforced at all times as much as he might think desirable. Our medical ethics, as high as any profession, occasionally become interpreted in the spirit of gamesmanship.

Whatever may be the attitude of students generally toward medicine, the undergraduates at Harvard certainly are attracted to it. About 40 *per cent* of them think seriously of going into medicine, and about 20 *per cent* actually do so.

But now let us look at some of the specific points of view shared by a few, sometimes a considerable number, of students. They don't like the feeling of "being treated as prep school boys," as a common complaint has it. Many of them feel rather lost and isolated the first year or two. A few think there is too much of a collegiate as compared to a professional atmosphere in Vanderbilt Hall. Others believe that the majority of faculty members tend to underestimate the rather large amount of general education possessed by most students. They tend to have more warmth of feeling and spontaneity of expression about patients earlier in their course than they do later when the anxiety brought about by the presence of death and suffering brings out the shallow defenses of superficial hardness and objectivity. For a few the nice old gentleman in the third bed on the right who had a heart attack last week later becomes that coronary in Bed 3. A preoccupation with a relatively minor electrolyte change, desirable enough in itself, may serve as a defense against becoming too closely identified with the patient and his complicated re-

lationships with the people about him.

The medical students who watch the specialist hurry rapidly through the brilliant summary of the most important aspects of his field are a little disappointed if some awareness of how this knowledge fits into the general scheme of medicine is not shown. They know only too well which special fields are presented in an excessively narrow way and which are not.

Perhaps the most overused cliché in medical education at present is that the physician should consider the whole man as he treats the patient's illness. Quite naturally the student accepts this principle, especially in the early years of his medical course. The trouble comes when he hears people repeat this phrase with impressive eloquence, then go ahead and demonstrate a very considerable lack of understanding of what it really means.

Students watch their instructors very carefully, some with the idea of trying to see how they relate themselves to their patients with the idea of imitating them later on, others with a frankly critical view. The instructor or "visit" who talks about delicate or intimate material within hearing distance of the patient, or who refers condescendingly to some physical characteristic of the ill person or who exhibits some other such inappropriate technique, is openly resented by many students. It places a rather heavy and sobering responsibility on all of us who teach to realize how much more we teach by indirect means than we do directly.

In the clinical years of training the over-emphasis on laboratory work at the expense of thinking about the patient's manner of reacting to his illness and his treatment continues in many quarters. The patient may get shut out in favor of relatively minor details of his blood chemistry. As William Temple said so succinctly, "If you begin by attending to objects insofar as they are measurable, you are likely to end by having only their measurements before your attention."¹ To order

all the tests that he can think of, or which he thinks may be required by the "visit" or by those who attend grand rounds, is an easy habit for the intern to acquire. In a sense, he is at a considerable disadvantage because so many persons without real responsibility but with critical minds are looking over his shoulder. The idea that the good clinician doesn't order and doesn't need so much laboratory work sounds good in theory but to act on it takes both courage and confidence, qualities not necessarily acquired at the same time. Needless to say, under-emphasis on the organic disability and over-emphasis on the emotional aspects of the patient's condition is a disastrous combination.

It is common knowledge in hospitals that are concerned with psychotherapy that disagreements between staff members often result in delayed progress of the patient toward recovery. Similarly, strong competition between divisions of the medical school, particularly that variety which appears as obvious antagonism, "permeates right down to the students," as one of them said. Some departments are able to show the student the advantages of self-education by the free use of references and laboratory and even get students to prize this privilege; others stimulate resistance and hostility by laying it on the line right at the outset of a course as to how much is to be done, in what manner, in what time, and by what reading, all spelled out. Which is the better device to encourage learning and curiosity is a proper subject for free and open discussions.

As we read or listen to accounts of physicians' lives in the past, we may readily come to the conclusion that doctors were more faithful, more self-reliant, wiser and less self-centered than now. Yet, if my memory serves me right concerning those I have known, they, too, had

¹ Temple, W., *Nature, Man and God*, Macmillan, London, 1953, p. 13.

their feet of clay, their short-comings, their strong feelings, not always entirely rational or under control. Our present generation of students has every bit as high ideals and standards as did those of our time and beyond and, I suspect, higher. More attention to the ethics of medical practice to match the emphasis on medical ethics will go far to produce more thoughtful physicians.

Medicine as practiced today is a kind of race between specialization and integration. Both are vitally necessary for progress, but having each individual engage in only one of these risks causing him to be either too narrow or too superficial. Becoming a specialist without retaining strong moorings in general medicine may unfit a man for his most effective association with other men. Many a student would like to

know how to balance his interests between medicine in general and his special field of interest, just as he would like to know how to work in all the general knowledge and special attitudes expected of him with his professional knowledge. This quandary of the student is shared in varying degrees by every one of the rest of us, and it merits earnest and prolonged attention.

Among the many good features of medical education at Harvard is the fact that basic attitudes between students and faculty are excellent. There is no war between the two groups. There is merely a strong desire on the part of many for more attention to the possibilities of the informal contacts between them. As one staff member expressed it recently, the problem of the faculty member's getting better acquainted with his students has to be balanced

against the even more desirable need of keeping acquainted with his own family. Increased quality of contacts and better sharing of those that exist, rather than increasingly larger blocks of time on the part of the teacher, should be emphasized.

To be critical of medical education at Harvard is not to disapprove. A healthy dissatisfaction with what is being done is the very essence of progress.

Fortunately, when men with good minds live and work together, learning progresses at a very rapid rate. In fact no one could stop it. No one has the correct answers, but constant speculation, trial of new methods, frequent changes in the grading system, and a ready willingness to accept change when it seems promising or desired will serve to keep Harvard Medical School in the vanguard of medical education.

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Inside H. M. S.

REFLECTIONS ON THE MEDICAL SCHOOL

by the Student Curriculum Committee

Norman Brown, '56

H.M.S. students perennially have many ideas, both destructive and constructive, about how their education is being conducted. As is so often the case, many of these ideas, although frequently and even vehemently expressed, have not been formally put together for security as a whole. To remedy this, the student body, with the encouragement of various Faculty members, set up a Curriculum Committee with the purpose of collecting and ripening some of the students' ideas. After preliminary discussion, the committee was set up in the following way: ¹

"1. Announcement to the Class of a plan to discuss our curriculum, with a request for volunteers (ten volunteered at the time, and ten subsequently joined).

2. Selection by the Class Officers of ten further men from the Class to fill out a "cross section".

"A plan of operation was decided upon at the first meeting: the Committee members were divided into "teams" or subgroups, one for each course, to report their ideas and progress to the Committee at a subsequent meeting specifically designated for discussion of this course. This division was arranged by placing men together who had either strongly positive or strongly negative feelings about the particular course. The courses studied were: Anatomy, Biochemistry, Physiology, Bacteriology, Pathology, Pharmacology, and Psychiatry.

"Each team operated in roughly the same manner:

1. Formulation of ideas or suggestions.
2. Visit to the Department of their course.
3. Discussion of ideas with the Committee with *inclusion* of factors bearing on such suggestions mentioned by the Department.

4. In some cases, a second visit to the Department to discuss the Committee's feelings.

5. Summary of ideas and progress in written reports.

"By means of the cooperation with the Departments, we hoped to prepare more feasible suggestions and encourage better understanding between Faculty and students. The purposes of the formal report were to give our fellow students an idea of how we have represented them, to provide any inter-departmental force or forces in existence with the ideas applicable to several courses and the integration thereof, and to provide the Departments with a record of the ideas discussed."

First, the courses of H.M.S. I-II were discussed, with formulation of suggestions for specific changes, and then, much as in an article of "the literature", more nebulous concepts of education ¹ were taken up.

"In every discussion of medical education, it becomes apparent that there are two objectives which could be achieved within the available time. These are: (1) the memorization of facts and the learning of mechanical operations to permit intelligent practice upon graduation, and (2) the understanding of the backgrounds of thought of the individual basic sciences for our use in handling and applying new concepts as they are added to medical knowledge. A combination of these objectives is necessary. The students' feelings were that while in some courses neither of the objectives was apparent, most courses presented a clear and appropriate balance of these aims." ¹

To achieve some improvement in this area of definition of H.M.S.'s purpose, it was felt that increasing the funds and staffs available to H.M.S. I-II would be fundamental. However, the ideal H.M.S. I-II teacher would need careful selection for such qualities as: desire to teach, interest in the application of his science to medicine as a whole, as well as interest in his own science's depth. Perhaps some of our difficulty stems from the discrepancy in attitudes between students and

¹ Taken from "Curriculum Committee Report, Class of 1956".

some of our teachers, as well as the teachers' limited time and numbers.

Turning to the Committee's consideration of courses, some of the specific suggestions for the Pathology course have already been instituted. These ideas were mostly in reference to increasing the use of fresh autopsy material and allowing student exposure to the activities of the functioning hospital Pathology Department. In Biochemistry, a salient suggestion was to increase the use of live-animal laboratory experiments, decreasing the present exercises of repetitious chemical determinations. Two members of the Committee wrote a detailed revision of Acid-Base thinking, i.e. in terms of the Bronsted Theory, for potential use in the course.

Bacteriology was criticised for failure to consider fundamental material before the more esoteric. A major increase in the time allotted to Psychiatry for H.M.S. I was proposed, along with a suggested format for such a course. (See "integration problem" below.)

In the Committee's more general thinking *four areas* were looked into:

- I. advisory program
- II. examinations
- III. student organizations
- IV. "integration problem"

I. The Committee felt that a basic H.M.S. problem was one of poor communication between Faculty-Administration and student. As H.M.S. III-IV have passed, many were pleased to feel considerably stronger bonds with the School through personal relationships with its people, who are of course the heart of the School. An advisory program was elaborated to try to overcome the gap across Longwood Avenue during H.M.S. I-II. The Committee's efforts were given impetus by Dr. Dana

Farnsworth's concrete proposal for an Advisory Program based on his earlier experiences at Williams, M.I.T., and now Harvard, as Professor of Hygiene. As a fulfillment of one of the Committee's recommendations, a full-time Assistant to the Dean has been installed. It is hoped that this innovation will help to bridge the administration-student breach, which now finds chief expression in student lack of awareness of school policy, mode of scholarship allotment, assignment of hospital courses.

II. Since H.M.S. II was found by many to be somewhat frustrating emotionally and intellectually, a proposal for fewer examinations, more practice examinations, and a reading period before a final comprehensive examination was made. The Committee was pleased to see that a change in H.M.S. II examinations was made as a step toward correction, but unfortunately, another example of poor communication was evident in this change. H.M.S. I students facing the potential change first heard rumors of change last May when facing their final examinations. Many worried questions and suppositions were passed around, and no official clarification was forthcoming until the final plan was announced in September at Registration for H.M.S. II. Just as we take an intelligent patient aside to explain various alternatives and the reasoning behind them before proceeding therapeutically, the Faculty might have consulted the students, the "patients" of their plan, before establishing the examination system.

III. The activities of the Vanderbilt Hall Committee have not been well known to the student body. Improvement of the representativeness of the Vanderbilt Hall Committee was searched for; although nothing final as yet has been proposed to the student body, enlarging the present Committee or establishing another

Ruzicka Aquatint Available

The Alumni Office announces that there is available a limited supply of an enlargement of the Christmas Card sent by Dean Berry in 1954. You will remember that the card featured a drawing in the manner of an aquatint of the Class Day exercises at the Longwood Quadrangle, as seen from the roof of Building D. The artist is Mr. Rudolph Ruzicka, designer and engraver, who is widely known for his engravings in color. The enlargement, which measures 12" x 16" on its mat, is available unframed for \$5. The Alumni Office will be glad to fill any orders upon request.

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Committee has been discussed. Ideally, some improvement in student-Faculty communication was again being sought here. Perhaps fewer Vanderbilt Hall riots would occur if more students felt a tangible liaison between themselves and the medical community, its spirit of education, patient care, and responsibility.

IV. In view of all the feeling in medical schools and among students today that some sort of integration program would make H.M.S. I-II more "interesting", the Committee devoted some time to formulating a plan for rearranging the present curriculum, with little regard for present Departmental lines. The Committee did *not* favor complete integration (such as at Western Reserve), but felt that by a new positioning and organization of the exposure to knowledge, a student could interrelate his learning better. Although Medicine and Science have changed greatly since Flexner, Curricula have not. Briefly, the Committee's suggestions were:

1. Split Anatomy teaching into:
 - a. brief introductory course, first semester, H.M.S. I
 - b. dissection and further details, second semester, H.M.S. II
2. Divide material of Bacteriology among:
 - a. Biochemistry—metabolism, mutants, etc.
 - b. Physiology—bacterial physiology
 - c. Laboratory Diagnosis—identification of bacteria, immunologic techniques, etc.
 - d. Pharmacology—chemotherapy
3. New course: Pathologic Physiology, second semester, H.M.S. II
Mechanisms of disease states (now being taken up cursorily in Laboratory Diagnosis)
4. Larger course in Psychiatry, H.M.S. I
 - a. small discussion groups and lectures
 - b. content: personality development of "normal man", reactions to patients, reactions of patients, etc.

Realizing its obvious inability to comprehend the limitations in achieving such changes, the Committee has no great piety for its particular plan. Perhaps the Committee favors change *per se*, not because it is good, but because it would stimulate the Faculty to have what Osler called a "quinquennial brain-dusting", in relation to what the H.M.S.-er faces in all courses at once, not just in the single well-managed course.

The members of the Committee enjoyed their opportunities to meet with the Faculty to discuss minor points of their courses as well as bigger problems of education. Perhaps if every student had the time and discussion with the Faculty members that the Committee did, the unrest about our education would be far less. Increased contact alone breeds understanding, and both teachers and students are encouraged and incited thereby to improve the educational environment.



HONORS



Dr. John G. Gibson, 2nd, Research Associate in Medicine in Harvard Medical School and Associate in Medicine at the Peter Bent Brigham Hospital, has been honored by the American Association of Blood Banks for research which has extended the life of red cells in collected blood. Dr. Gibson's work in modifying the citrate dextrose storage solution and employing this in conjunction with the plastic collection bottle developed by Dr. Carl Walter, Associate Clinical Professor of Surgery at Harvard, has resulted in significant increase in the survival of red blood cells collected for subsequent transfusion.

* * *

Dr. Charles B. Huggins, '24, has been awarded the 1955 Borden Award in the Medical Sciences. Dr. Huggins, who is Director of the Ben May Laboratory for Cancer Research, and Professor of Urology in the University of Chicago School of Medicine, was cited for his outstanding contributions in the field of cancer research, particularly that portion of the field that concerns itself with the relationships between the endocrine glands and malignant disease. Dr. Huggins was presented with the gold medal and award at the 66th Annual Meeting of the Association of American Medical Colleges on October 24, 1955, at Swampscott, Massachusetts.

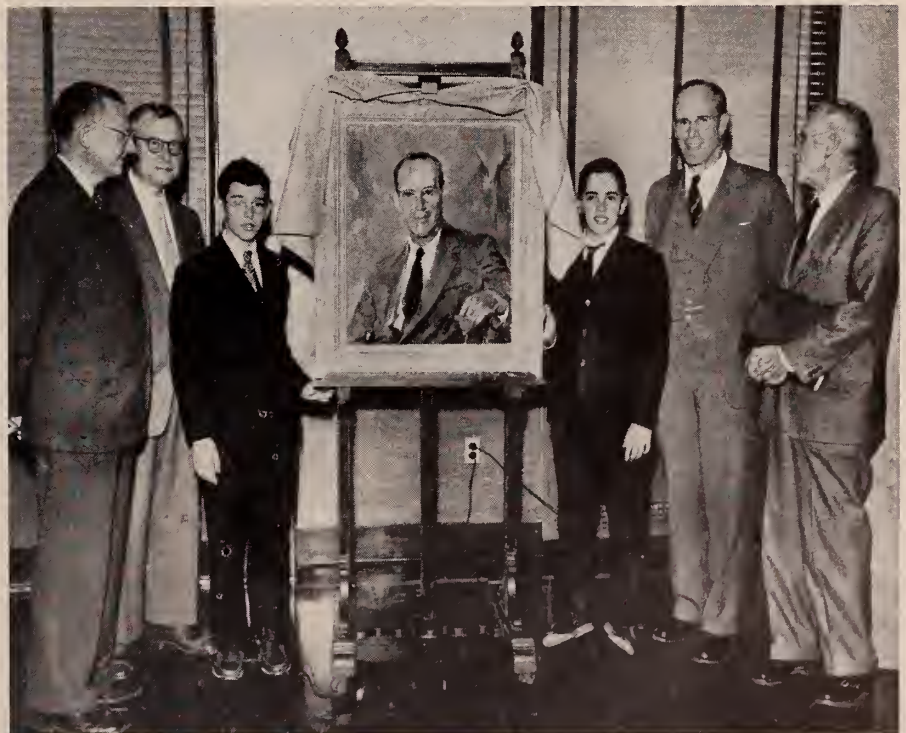
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On Friday, November 11, at the dinner meeting of the Sixth Annual United Cerebral Palsy Convention in Boston, Dr. Paul I. Yakovlev, Assistant Clinical Professor of Neurology in Harvard Medical School and Curator of the School's Warren

Anatomical Museum, was named winner of the annual United Cerebral Palsy Max Weinstein Award. The award, a plaque and a check for \$1000, was given to Dr. Yakovlev in recognition of his "helping to increase basic knowledge about the patterns of malformation which occur in the central nervous system."

Dr. Sidney Farber, '27, who made the presentation to Dr. Yakovlev, was himself honored for his distinguished leadership in science, as well as for his devoted work as first chairman of the U.C.P. Advisory Board. The decision of the U.C.P. to allot a portion of its funds raised each year to the unrestricted use of the nation's medical schools is in large measure the result of the imaginative thinking and courageous leadership of Dr. Farber.

James M. Faulkner, '24, former Dean of Boston University School of Medicine, was recently honored by his colleagues there when they presented to the School a portrait of him painted by William Draper. Participating in the ceremonies were Dr. Chester S. Keefer, the present Dean of Boston University School of Medicine; Dr. Burnham S. Walker, Professor of Biochemistry; Dr. Faulkner's two sons, Andrew and Henry, who performed the actual unveiling; and Paul Dudley White, '11, a friend and colleague of the Faulkner family for many years, and one of Dr. Faulkner's teachers in Harvard Medical School. Dr. Faulkner resigned his position at Boston University to become Medical Director at the Massachusetts Institute of Technology.



Egan Photo Service

Left to right: Dr. Chester S. Keefer, Dr. Burnham S. Walker, Andrew and Henry Faulkner, Dr. Faulkner, and Dr. Paul Dudley White, '11, at ceremonies honoring Dr. Faulkner at the time of his resignation from Boston University.

ART AT WARREN MUSEUM



Etching by Daumier

Fine arts came to the Warren Anatomical Museum last month with the exhibition of a loan collection from the Philadelphia Museum of Art, consisting of 85 rare prints depicting the history of medical practice.

Included were a muscle chart from Vesalius' *Fabrica* (probably drawn in Titian's workshop), and works by Goya, Rembrandt, Daumier, Tou-

louse-Lautrec, and Hogarth, as well as reflections on the American scene by Winslow Homer and Thomas Eakins. The exhibit presented a wide range of techniques and subject matter, and represented the progress of medicine through the ages.

This outstanding collection was made available through the courtesy of Smith, Kline, and French Laboratories, which originally donated it to the Philadelphia Museum. It has previously been shown in many other medical centers in the United States.

Under the new leadership of Dr. Paul I. Yakovlev, the Warren Museum has been undergoing remodeling and reorganization, with the aim of making it more of a "working" museum. Exhibits such as this one, it is felt, will increase the interest of



Toulouse-Lautrec water color

students and other members of the medical professions in the many unique opportunities for study and research which the Museum has to offer.

THE DUNHAM LECTURES

On October 14th, 17th and 19th the annual Edward K. Dunham Lectures were delivered at the Medical School by Dr. Hans Winterstein, research professor of physiology at the Institute of Physiology, Istanbul, Turkey. Dr. Winterstein, an international authority on the physiology of respiration, centered his three discussions around the general problem of "the chemical control of pulmonary ventilation". He was introduced by Dr. Otto Crier, professor of pharmacology at Harvard Medical School, who sketched Dr. Winterstein's background first as chairman of the physiology department in Rostuk and later in Breslow, Germany, and thence to his present position at Istanbul University. Dr. Crier described Professor Winterstein's life-long interest in general anesthesia and in the problems of pulmonary ventilation. "He is", said Dr. Crier, "one of the relatively few biologists who combine the rigorous training of the experimental investigator with a

thorough schooling in philosophy". In his first lecture, Professor Winterstein traced the development of scientific knowledge regarding respiratory regulation by the chemoreceptors in the carotid and aortic bodies and described the extraordinary sensitivity of these protective cells to changes in blood-oxygen tension. Afferent fibers leading to the respiratory center evoke suitable changes in pulmonary ventilation in response to changing oxygen tensions. In his second lecture Professor Winterstein described the respiratory regulation of carbon dioxide tension. Respiratory acclimatization to hypoxia, particularly to those low oxygen tensions encountered at high altitude, demands an increase in pulmonary ventilation in order to maintain adequate oxygen supply. This increase mediated largely by the chemoreceptors described in the first lecture also results in respiratory loss of carbon dioxide and a decrease in blood-carbon dioxide tension. The diminution in car-



Vesalius' muscle chart

T. Duckett Jones Memorial Fund

bonic acid content thus occasioned would result in an intolerable alkalosis were it not for renal losses of bicarbonate occurring in condensation therefore. In his third lecture, the Dunham lecturer attempted to unify these phenomena by pointing out that the common denominator was a change in hydrogen ion concentrations or in pH which was operative in all the compensatory responses.


The Dunham Lectureship, founded in 1923 in memory of Dr. Edward K. Dunham (M.D. Harvard 1886), was established by Mrs. Dunham as a memorial to her husband. It has as its purpose the cementing of "the bonds of fellowship and understanding between the students and investigators in this and foreign countries." Among the distinguished medical scientists who have given the lectures in the past are seven Nobel Laureates.

Income from a memorial fund honoring the late T. Duckett Jones, M.D. (University of Virginia, '23), former director of the House of the Good Samaritan in Boston, will support outstanding young scientists seeking investigative careers in rheumatic fever and related fields, according to Mrs. James R. Campbell, chairman of the Fund. Mrs. Campbell reported initial gifts of \$15,000 from the Helen Hay Whitney Foundation, of which Dr. Jones was medical director at the time of his death last year, and of \$25,000 from the Ford Foundation in recognition of Dr. Jones's distinguished service as a member of their trustee committee. The third major contribution was made by the Albert and Mary Lasker Foundation, Inc. Dr. Jones, whose work with rheumatic fever was

widely known, was Lecturer on Medicine in Harvard Medical School at the time of his death, and had previously held the post of Assistant Professor of Medicine. In recognition of his outstanding achievements in the cause of heart disease, Dr. Jones was recently given posthumously a Gold Heart Award, the American Heart Association's highest honor. The raising of supplementary funds is being undertaken by a committee whose membership includes Dr. Paul D. White, '11, Dr. Walter Bauer, Jackson Professor of Medicine in Harvard Medical School, and Dr. David Rutstein, '34, Professor of Preventive Medicine in Harvard Medical School. Recipients of awards from the Fund will be known as T. Duckett Jones Research Scholars.

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NEW APPOINTMENTS

Dr. James L. Whittenberger has been named Assistant Dean of the Faculty of Public Health in Harvard University. Dr. Whittenberger has been Professor of Physiology at the School of Public Health since 1951 and has been active in research devoted to methods of improving artificial respiration, the diagnosis and treatment of lung diseases, the respiration of patients with poliomyelitis, and the effects of air contamination on respiratory diseases.

* * *

Dr. Benjamin D. Paul has been appointed Associate Professor of Social Anthropology at the Harvard School of Public Health. He is one of the first behavioral scientists appointed to professorial status in the School of Public Health. Dr. John C. Snyder, '35, Dean of the School, said that Dr. Paul's appointment emphasized the increasing need for an awareness of the interrelations between cultural patterns and public health problems. Dr. Paul's appointment follows the recommendations made by a Harvard University Faculty committee in the Behavioral Science Survey and Report of 1954. In this Report, Dr. Hugh R. Leavell, Assistant Dean of the School of Public Health, pointed out that "the public health man who understands what culture is and what it means to the people can do a better job than one who goes blindly about his business or even one who depends upon his instincts. The man who understands what is involved in making a cultural change will not attempt to promote a public health program which involves marked change unless it is inescapable."

Dr. Paul attended the University of Wisconsin and received his A.B. degree from the University of Chi-



Walter Fleischer

Dr. Dunphy

cago in 1938, and his Ph.D. in Social Anthropology there in 1942. He has made numerous studies of community life in Central America.

* * *

J. Engelbert Dunphy, '33, formerly Clinical Professor of Surgery in Harvard Medical School and at the Peter Bent Brigham Hospital, has been named director of the new Harvard Surgical Unit and the Sears Memorial Laboratory at the Boston City Hospital. The appointment officially marks the return of Harvard to the Fifth Surgical Service after an absence of almost 14 years. In addition to this post, Dr. Dunphy fills the newly created post of Boston City Hospital Surgical Professor in the Harvard Medical School. Dr. Dunphy, who edited the *Bulletin* from 1949 to 1953, has not yet become so overwhelmed in his new duties as to forget his readership. He writes to inform us that the present service consists of 100 surgical beds and that the relations with the spe-

cialty service are shared with the other two university services at the City Hospital, Tufts and Boston University. The organization of the service has been set up on strictly university grounds and Dr. Dunphy points out that there is no concern about political or other interference with appointments. "The most interesting feature of the department here," he writes, "is the fact that we have inherited the old surgical building. The building was originally designed as a huge operating room building and housed the Cheever amphitheatre where Dr. David Cheever's father, who was Professor of Surgery in the Medical School and Chief of the Surgical Services here, worked. This amphitheatre is going to be completely renovated and the entire building, four floors of it, will be converted gradually into offices and laboratories. The endowment for the new laboratory and rebuilding the former surgical operating building is from grants from a charitable trust left by Charles H. Tylor as a memorial to Dr. George G. Sears, hospital trustee. It is Dr. Dunphy's purpose to orient the laboratory particularly toward tissue metabolism with special reference to wound healing and to growth and transplantation of neoplastic tissue. "One of the nicest things about this job," he concludes, "has been the extreme optimism and enthusiasm with which our new service has been welcomed by all of the existing services. I have been aware of no resistance, no antagonism and no interference in any way." The new Boston City Hospital Professor of Surgery at Harvard Medical School has promised to write an article for the *Bulletin* on the historical aspects and future prospects of his new service in the near future.

